

County  
Borough  of Derby.

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ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE

**YEAR 1910,**

BY

**Albert E. Brindley, M.D., B.Sc., D.P.H., &c.,**

MEDICAL OFFICER OF HEALTH, MEDICAL SUPERINTENDENT OF THE BOROUGH  
ISOLATION HOSPITAL, AND MEDICAL OFFICER TO THE  
EDUCATION COMMITTEE.

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# County Borough of Derby.

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PUBLIC HEALTH DEPARTMENT,

FORD STREET, DERBY,

*April, 1911.*

TO THE

Chairman and Members of the Sanitary Committee of  
the County Borough of Derby.



GENTLEMEN,

I beg to submit my Third Annual Report on the Health and Sanitary Condition of your Borough during the year 1910, this being the 34th Annual Report of your Medical Officer of Health. The vital statistics for the year are, on the whole, very satisfactory; the death-rate is the lowest recorded as based on the estimated population. It is quite probable that the population is somewhat overestimated, but it is satisfactory to note that even if the death-rate were based upon the census population of 1901, the death-rate would yet be the lowest recorded. More satisfactory still, perhaps, is the low infantile mortality, which is also the lowest recorded in the history of the Borough, and, of course, is not based upon any estimated population, but upon the actual number of births registered.

It is interesting to note that this great fall in the infantile mortality coincides with the inauguration of the Mothers' and Babies' Welcome in January of the year, full details of which are given in Miss Davies' Report.

The number of deaths from Infantile Diarrhoea were again low during 1910, as in the preceding year. A good deal of this satisfactory result must be again attributed to the cold and wet summer of 1910.

Diphtheria, although still persisting in the town, has shown a decided tendency towards diminution. This infectious disease has shown a somewhat remarkable persistence in Derby of late years, and it will not be possible to relax in any way our vigilance in seeking out unrecognized or "carrier" cases of this disease for some time to come. It should be remembered that the number of cases recorded in this report is not comparable with the numbers recorded in other towns, since we include all cases, discovered either by the officers of the Health Department or by medical men, who have Diphtheria bacilli in their throats, even though they may have no clinical symptoms of the disease. These latter cases are not usually included in the numbers notified in other towns in this country.

Among the most important administrative procedures carried out during the year was the establishment near our Infectious Diseases Hospital of a small Consumption Sanatorium. This was not ready for occupation in 1910, but will be occupied early in 1911, and although this Institution is on a modest scale (accommodation for 20 patients), yet it is hoped that it may have far-reaching effects, of an educational nature at any rate, in preventing the most serious infectious disease with which we have to deal.

In conclusion, I wish again to express my indebtedness to my colleagues and other Corporation Officials for their valuable and ready help, and to you, gentlemen, for your kind and courteous consideration.

I am, Gentlemen,

Yours obediently,

A. E. BRINDLEY,  
MEDICAL OFFICER OF HEALTH.



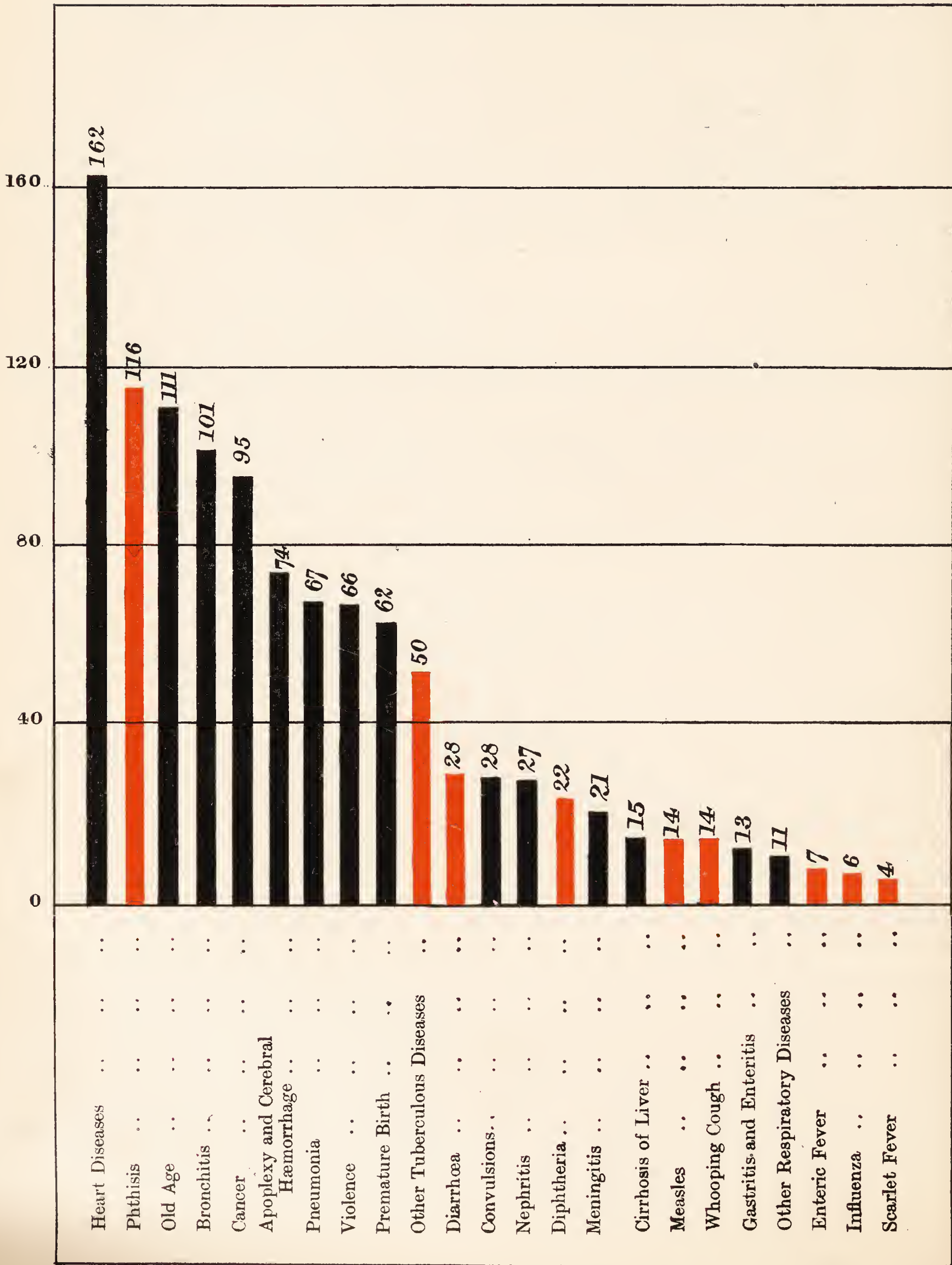
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CHART SHOWING PRINCIPAL CAUSES OF DEATH, 1910.

Deaths from Infectious Diseases.

Deaths from Other Diseases.



## STATISTICAL SUMMARY, 1910.

Population estimated to the middle of 1910	{	Males ... 63,998	}	Total ... 131,256
	{	Females ... 67,253	}	
Marriages	...	...	...	994
Annual rate of Persons Married per 1,000 of the population				15.15
Births	{	Males .. 1,641	}	Total ... 3,163
	{	Females ... 1,522	}	
Annual rate of Births per 1,000 of the population				24.1
Deaths	{	Males ... 761	}	Total ... 1,444
	{	Females ... 683	}	
Annual rate of Mortality per 1,000	{	Males ... 11.9	}	Total ... 11.01
	{	Females ... 10.1	}	
Excess of Registered Births over Deaths				1,719
Infantile Mortality				84 per 1,000 births.

**Area.**—The area of the old Borough is 3,445 acres. The acreage of the portions of Normanton, Osmaston, and Alvaston, and Boulton, added to the Borough, Nov., 1901, is 1,815.

**Elevation.**—The inhabitants of Derby reside at a mean elevation of 182 feet above sea level, the highest point being at the Borough Boundary in Burton Road, 325 feet, and the lowest at “The Siddals,” 142 feet. The elevation at the Market Place is 157 feet.

**Houses.**—At the Census of 1901 there were 26,625 houses, of these, 24,851 were inhabited, and of the remaining 1,774, there were, on Census night, 995 “in occupation,” that is, utilised for business or other purposes but without occupants, whilst 779 were not “in occupation.” In addition there were 228 houses in course of erection.

**Density.**—The mean density of the Borough was equal to 24 persons per acre. The density of the various wards was as follows:—Abbey 36, Arboretum 83, Babington 72, Becket 81, Bridge 26, Castle, 80, Dale 21, Derwent 7, Friar Gate 56, King’s Mead 89, Litchurch 21, Markeaton 55, Normanton 79, Osmaston 5, Pear Tree 21, and Rowditch 26 persons per acre.

**Annual Rateable Value.**—The rateable value of the Borough for 1910 was £530,966 for District Rate purposes, and £555,337 for Poor Rate purposes.

## LEGAL SUMMARY.

### Local Acts (containing Sanitary Provisions).

The Derby Waterworks Acts, 1848, 1868, 1873.

The Derwent Valley Water Acts, 1899, 1901, 1904, and 1909.

The Derby Improvement Act, 1879, Part IV.

The Derby Corporation Tramways Act, 1899, Part III.

The Corporation Acts, 1877 (Sec. 60), 1901.

### Acts Adopted.

Public Health Acts Amendment Act, 1890, Part III., came into operation 20th September, 1899.

Infectious Diseases (Prevention) Act, 1890 (Secs. 7 & 13), came into operation 20th February, 1902.

Public Health Acts Amendment Act, 1890, Part II., came into operation 12th December, 1904.

Notification of Births Act, 1907, came into operation 11th January, 1908.

Public Health Acts Amendment Act, 1907 (Secs. 19, 22, 23, 25, 28, 30, 31, 33, 34-37, 46, 50-58), adopted 1st December, 1909.

### Byelaws and Regulations.

1838. Unsound Meat, Nuisances, etc.

1858. Public Baths and Washhouses.

1859. Slaughter-houses.

1859. Nuisances, Snow, Filth, etc.

1877. Water Supply.

1885. New Streets and Buildings.

1890. Common Lodging Houses.

1891. Nuisances (additional).

1859. }  
1886. } Height of Rooms.

1892. Street Stop Taps.

1898. Dairies, Cowsheds, and Milkshops.

1899. Houses Let in Lodgings.

1904. Public Baths.

1904. Regulations as to Branch Sewers in Main Drainage Area.

1907. Expectoration in Public Places, etc., Banana Skins, etc.

1908. Factory and Workshop Statutory Rules and Regulations.

TABLE I.—Population, Number of Births, Total Deaths, and Deaths from certain causes, with the rates per 1,000 of the Population in the Borough of Derby for the past thirty-three years.

YEAR	Population.	Corrected Number of Deaths.	Death-rate per 1,000 living.	Births.	Birth-rate per 1,000 living.	Deaths from seven principal Zymotic Diseases.	Zymotic rate per 1,000 living at all ages.	Deaths from Phthisis.	Phthisis Death-rate.	Infantile Mortality per 1,000 Births.	Deaths from Respiratory Diseases exclusive of Phthisis.	Respiratory Death-rate.
1876	80,355	1,613	20.1	3,092	38.4	257	3.1	162	2.0	148	296	3.6
1879	80,385	1,970	24.5	3,139	39.4	380	4.7	147	1.8	132	407	5.0
1880	80,385	1,614	20.1	3,050	37.9	233	2.8	140	1.7	145	224	2.7
1881	81,470	1,529	18.9	3,156	38.8	166	2.03	131	1.6	129	287	3.5
1882	82,687	1,533	18.5	2,959	35.7	187	2.2	140	1.6	139	259	3.1
1883	83,922	1,549	18.6	3,074	36.6	144	1.7	146	1.7	146	263	3.1
1884	85,176	1,569	18.4	3,013	35.3	181	2.1	131	1.5	143	259	3.0
1885	86,449	1,591	18.4	3,055	35.3	132	1.5	128	1.3	138	310	3.5
1886	87,741	1,651	18.8	3,069	35.9	166	1.8	154	1.7	148	272	3.1
1887	89,052	1,683	18.9	2,858	32.9	223	2.5	146	1.6	138	247	2.7
1888	90,383	1,550	17.1	2,824	31.2	163	1.8	116	1.2	145	271	2.9
1889	91,733	1,582	17.2	2,906	31.6	133	1.4	99	1.7	147	281	3.0
1890	93,105	1,843	19.8	2,699	28.9	260	2.7	143	1.5	160	326	3.5
1891	94,422	1,765	18.7	2,885	30.6	126	1.4	139	1.5	139	158	1.7
1892	95,528	1,734	18.2	3,038	31.8	174	1.9	140	1.5	171	295	3.1
1893	96,648	1,740	18.1	3,123	32.4	190	2.0	132	1.4	155	281	2.9
1894	97,781	1,468	15.1	2,890	29.6	151	1.6	103	1.1	121	249	2.6
1895	98,927	1,669	16.9	2,909	29.4	178	1.8	105	1.1	158	254	2.6
1896	100,087	1,577	15.8	2,834	28.4	182	1.9	137	1.4	150	240	2.4
1897	101,262	1,656	16.4	2,803	27.7	173	1.8	99	0.98	168	249	2.5
1898	102,448	1,756	17.2	2,860	28.0	235	2.3	133	1.3	169	257	2.6
1899	103,649	1,775	17.2	2,984	28.8	173	1.7	116	1.2	163	244	2.4
1900	104,684	1,854	17.7	2,900	27.7	247	2.4	113	1.1	173	271	2.6
1901	106,076	1,598	15.1	2,939	27.8	189	1.8	99	0.94	155	220	2.8
1902	116,869	1,639	14.1	3,326	28.5	145	1.3	102	0.87	126	264	2.3
1903	118,707	1,596	13.5	3,215	27.1	108	0.9	102	0.86	128	210	1.8
1904	120,449	1,824	15.2	3,282	27.3	167	1.4	121	1.01	143	264	2.2
1905	122,207	1,746	14.3	3,108	25.5	183	1.5	96	0.79	151	254	2.1
1906	123,981	1,733	14.0	3,103	25.1	188	1.6	113	0.92	116	244	2.0
1907	125,774	1,784	14.2	3,152	25.1	219	1.8	121	1.0	120	269	2.2
1908	127,583	1,678	13.2	3,321	26.1	134	1.1	115	0.91	109	223	1.8
1909	129,411	1,712	13.3	3,220	24.9	177	1.4	129	1.0	122	251	2.0
1910	131,256	1,444	11.01	3,163	24.1	89	0.7	116	0.9	85	183	1.4

# **VITAL STATISTICS FOR 33 GREAT TOWNS, 1910.**

## **REGISTRAR GENERAL'S RETURNS.**

<i>Towns.</i>	<i>Death- Rate.</i>	<i>Epidemic Death- Rate.</i>	<i>Infantile Mortality</i>	<i>Birth- Rate.</i>
1 Croydon ...	10·9	·61	88	23·2
2 DERBY ...	11·0	·55	85	24·1
3 Leicester ...	11·3	·68	127	21·4
4 Bristol ...	11·5	·59	90	21·6
5 West Ham ...	11·7	1·19	101	26·4
6 Southampton ...	11·7	·69	79	23·0
7 Cardiff ...	11·8	·94	112	24·3
8 Norwich ...	12·4	·68	103	23·0
9 London ...	12·7	1·14	102	23·9
10 Halifax ...	12·8	·71	91	16·5
11 Gateshead ...	12·9	1·35	152	27·1
12 Bolton ...	13·4	1·02	116	23·0
13 Sheffield ...	13·4	1·49	127	26·5
14 Plymouth ...	13·5	1·16	114	20·2
15 South Shields ...	13·6	1·24	113	28·0
16 Birmingham ...	13·6	1·12	130	26·2
17 Leeds ...	13·6	1·27	132	22·1
18 Portsmouth ...	13·7	1·36	104	26·6
19 Newcastle-on-Tyne ...	13·8	1·15	120	26·4
20 Bradford ...	14·0	1·24	127	18·6
21 Blackburn ...	14·1	1·31	137	21·4
22 Nottingham ...	14·1	1·02	129	24·8
23 Brighton ...	14·2	1·26	111	19·8
24 Salford ...	15·1	1·70	130	26·7
25 Hull ...	15·2	1·75	135	28·6
26 Rhondda ...	15·6	1·69	136	40·7
27 Sunderland ...	15·8	1·43	129	28·5
28 Manchester ...	16·0	1·79	131	27·1
29 Birkenhead ...	16·2	1·78	134	30·4
30 Preston ...	16·2	1·71	158	23·6
31 Burnley ...	16·3	2·46	170	24·9
32 Oldham ...	17·2	1·81	128	25·8
33 Liverpool ...	17·7	2·28	139	30·1
77 Great Towns ...	13·4	1·23	115	24·9

## Vital Statistics for the Year 1910.

**Estimated Population.**—The estimated population of the Borough at the middle of 1910 was 131,256. This total includes the inhabitants living in the parts of the Borough added in the year 1901, and also makes allowance for the probable increase in these districts. The increase in population during the twelve months is thus estimated to be 1,845, which is 126 higher than the excess of births over deaths.

**Marriages.**—The number of marriages which were solemnized during 1910 was 994; this represents a rate of persons married equal to 15·15 per 1,000 of the population, which is an increase of 0·20 compared with the previous year. The following table gives information relating to the marriage-rate for the past 13 years:—

Year.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.
Number of Marriages.	961	961	1025	943	948	957	973	972	981	1005	982	967	994
Rate.	18·8	18·6	19·6	17·8	16·3	16·1	16·17	16·0	15·9	15·9	15·4	14·95	15·15

## BIRTHS.

**Birth-Rate.**—The births registered during the year numbered 3,163, compared with 3,220 in 1909. Of the 3,163 births there were:—

	Males.	Females.	Total.
Legitimate ... ..	1,607	1,493	3,100
Illegitimate ... ..	34	29	63

Grand Total ... 3,163

From these figures it will be seen that the illegitimate births represent 2·0% of the present total, as compared with 2·2% in the previous year, 2·8 in 1908, and 3·9 in 1907. In the following table is set out the distribution of all births, both legitimate and illegitimate:—

TABLE II.—Relating to Births, Legitimate and Illegitimate.

WARD.	BIRTHS.			Birth Rate per 1,000.	Illegitimate Births per 1,000 Births in 1910.	Total Legitimate and Illegitimate Births registered during the years 1902 to 1910.		
	Legitimate.	Illegitimate	Total			Legitimate.	Illegitimate	Illegitimate per 1,000 Births.
Abbey ...	283	7	290	28·7	25	2586	98	38
Arboretum ...	183	3	186	18·5	16	1729	54	32
Babington ...	149	5	154	16·1	33	1328	43	33
Becket ...	149	5	154	18·8	33	1364	68	50
Bridge ...	119	3	122	21·0	26	1034	41	40
Castle ...	233	4	237	26·7	17	2071	88	43
Dale ...	247	8	255	45·9	32	1819	45	25
Derwent ...	126	2	128	22·7	16	1344	36	27
Friargate ...	200	4	204	21·0	20	1911	55	29
Kingsmead ...	174	7	181	22·7	39	1554	105	68
Litchurch ...	161	5	166	17·3	31	1453	72	50
Markeaton ...	181	3	184	22·4	17	1934	78	41
Normanton ...	219	3	222	26·6	13	2135	42	20
Osmaston ...	203	3	206	32·8	15	1785	56	32
Pear Tree ...	293	0	293	36·4	0	2269	42	19
Rowditch ...	180	1	181	19·9	6	1546	67	43
Totals ...	3100	63	3163	24·1	20	27,862	990	36
Others ...	35	...	35	...	...	7	...	...

The births registered during the year numbered 3,163, in which total are included 1,641 boys and 1,522 girls. This represents a birth-rate of 24·1 per 1,000, compared with 24·9 last year, 26·1 in 1908, and 25·1 in 1907 and 1906. The rate for 1910 is the lowest recorded. For 1905, the rate was 25·6, and in 1904 it was 27·3. It is interesting to compare the yearly increases in population as represented by the difference between registered births and deaths in the early half of the “eighties,” and those recorded since the extension of the Borough in the present decade. The population in the first period was only practically two-thirds what it is to-day, the death-rate was never less than eighteen, and the birth-rate was only once below thirty-five.

Year.	Birth Rate.	Death Rate.	Natural Increase of Population.	Year.	Birth Rate.	Death Rate.	Natural Increase of Population.
1882	35·7	18·5	1426	1902	28·5	14·1	1687
1883	36·6	18·6	1555	1903	27·1	13·5	1619
1884	35·3	18·4	1444	1904	27·3	15·2	1458
1885	35·3	18·4	1464	1905	25·5	14·3	1362
1886	35·9	18·8	1418	1906	25·1	14·0	1370
1887	32·9	18·9	1175	1907	25·1	14·2	1368
				1908	26·1	13·2	1643
				1909	24·9	13·3	1503
				1910	24·1	11·01	1719

In the earlier period the first five years show a fairly constant natural increase, but in 1887 a marked decline in the birth-rate without any corresponding fall in the death-rate resulted in a distinct diminution in the number of individuals added to the population by the excess of births over deaths. In the later period the figures showed for several years a progressive decline, notwithstanding the increasing population. During the last three years, however, the natural increase of population has tended to rise; in fact, in 1910 this was the highest recorded, in spite of the low birth-rate (the lowest recorded).

As regards the various wards, the birth-rates, as in previous years, varied between very wide limits, being as low as 16·1 in Babington Ward, and 17·3 in Litchurch Ward, and as high as 45·9 in Dale Ward. Babington Ward had the lowest birth-rate in 1908 and 1909, and Dale Ward the highest. Almost each year these wards have respectively the lowest and highest birth-rates. Rates of over 30 were recorded in Osmaston and Pear Tree Wards. Abbey and Castle Wards had respectively rates of 28·7 and 26·7. Litchurch, Arboretum, and Becket Wards have a rather low birth-rate, whilst Rowditch Ward has slightly increased.

The number of births which have been divided for the purpose of ascertaining facts relating to illegitimacy now exceeds 28,000, and it will be observed that practically one child in every 30 born in Derby is illegitimate. The rate of illegitimacy is highest in King's Mead Ward, as in 1909 and 1908, not less than one child in 16 being born with that social stigma attached to it. The wards

which show the next highest figures are Becket and Litchurch Wards, rather less than one child in 21 being illegitimate. Rowditch and Castle Wards show the next highest rate of one in 24. The credit for the lowest illegitimate rate belongs to Pear Tree Ward, whilst a low rate is also recorded in Normanton Ward; three other wards, Dale, Derwent, and Friargate Wards have also rates below 30. It is interesting to note that two of the wards which have already been mentioned as having high birth-rates have also low illegitimate rates.

**Notification of Births Act, 1907.**—This Act was adopted by the Council at a meeting held on December 4th, 1907, and came into operation early in January, 1908. The number of births notified during 1910 was 98% of the total registered. Details of work done under this Act will be found on pages 81-83 and 87. In one instance a father was prosecuted for failing to notify the birth of his child, and ordered to pay costs.

**Still-births.**—The number of burials of still-born children in the Derby cemeteries is the lowest recorded.

Appended herewith is the usual table relating to these burials for the past 16 years.

For the particulars contained in the following table, I am indebted to Mr. C. E. Oliver, Clerk to the Derby Burial Board:—

*Burials in the Derby Cemeteries during the past 16 years.*

Year.	Ordinary Burials.	Burials of Still-born Children.	Total.	Percentage of Burials of Still-born Children to the whole.
1895	1587	210	1797	11·7
1896	1510	218	1728	12·7
1897	1581	182	1763	10·4
1898	1744	178	1922	9·3
1899	1787	193	1980	9·8
1900	1887	195	2082	9·4
1901	1627	246	1873	13·2
1902	1552	217	1769	12·3
1903	1522	184	1706	10·8
1904	1704	154	1858	8·3
1905	1692	161	1853	8·5
1906	1666	171	1837	9·4
1907	1627	155	1782	8·7
1908	1558	163	1721	9·5
1909	1618	152	1770	8·1
1910	1365	130	1495	8·7

## DEATHS.

**Annual Rate of Mortality.**—The total number of deaths registered during the year was 1,556, as against 1,799 in 1909, 1,773 in 1908, 1,870 in 1907, and 1,832 in 1906; of these deaths 117

were of strangers; and there were five deaths of Derby residents registered outside the Borough, making a net total of 1,444. The net death-rate, therefore, from all causes was 11·01 per 1,000, as against 13·3 in 1909, 13·2 in 1908, 14·2 in 1907, and 14·0 in 1906.

### Principal Causes of Death, 1910.

COMPARISON WITH 1909.

				<i>Deaths in 1910.</i>	<i>Increase.</i>	<i>Decrease.</i>
Heart Diseases	...	...	...	162	...	26
Phthisis	...	...	...	116	...	13
Old Age	...	...	...	111	...	20
Bronchitis	...	...	...	101	...	44
Cancer	...	...	...	95	...	1
Apoplexy and Cerebral Hæmorrhage	...	...	...	74	3	...
Pneumonia	...	...	...	67	...	29
Violence Causes	...	...	...	66	11	...
Premature Birth	...	...	...	62	...	26
Other Tuberculous Diseases	...	...	...	50	3	...
Diarrhœa	...	...	...	28	...	22
Convulsions	...	...	...	28	...	16
Diphtheria	...	...	...	22	...	11
Meningitis	...	...	...	21	4	...
Cirrhosis of Liver	...	...	...	15	...	8
Measles	...	...	...	14	...	31
Whooping Cough	...	...	...	14	...	29
Gastritis and Enteritis	...	...	...	13	1	...
Other Respiratory Diseases	...	...	...	11	1	...
Enteric Fever	...	...	...	7	5	...
Influenza	...	...	...	6	...	8
Scarlet Fever	...	...	...	4	...	...



**TABLE III.—Infantile Mortality during the Year 1910.**  
Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.	NON-RESIDENTS.
Certified .. .. .		73	16	19	10	118	31	17	18	15	8	13	14	10	9	7	6	266	8
Uncertified .. .. .		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
i. Common Infectious Diseases.	Small Pox .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Chicken-pox .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Measles .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
	Scarlet Fever .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Diphtheria: Croup .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
	Whooping Cough .. .. .	..	..	..	..	..	1	1	..	..	..	..	3	..	1	..	..	6	..
ii. Diarrhoeal Diseases.	Diarrhoea, all forms .. .. .	..	..	..	..	..	..	..	1	2	..	1	2	1	1	..	1	9	..
	Enteritis, Muco-enteritis, Gastro-enteritis .. .. .	1	..	..	1	2	4	..	3	..	..	..	..	2	..	..	1	12	..
	Gastro-intestinal Catarrh .. .. .	..	..	..	..	..	1	1	2	..	..	..	1	..	..	..	..	5	..
	Premature Birth .. .. .	39	8	4	2	53	5	2	1	1	..	..	..	..	..	..	..	62	1
	Congenital Defects .. .. .	6	1	1	..	8	3	..	..	2	..	..	..	..	..	..	..	13	1
	Injury at Birth .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
iii. Wasting Diseases.	Want of Breast-milk, Starvation .. .. .	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..
	Atrophy, Debility, Marasmus .. .. .	6	2	3	1	12	6	2	2	..	1	1	2	1	..	..	..	27	1
	Tuberculous Meningitis .. .. .	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	3	1
	Tuberculous Peritonitis: Tabes Mesenterica .. .. .	..	..	..	..	..	..	1	1	1	2	2	..	1	..	1	1	16	..
	Other Tuberculous Diseases .. .. .	..	..	1	..	2	..	..	..	..	..	..	..	..	..	1	..	1	..
	Erysipelas .. .. .	..	..	1	1	2	..	..	..	..	..	..	..	..	..	..	..	2	..
v. Tuberculous Diseases.	Syphilis .. .. .	2	1	..	..	3	..	..	..	..	..	..	..	..	..	..	..	3	1
	Rickets .. .. .	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..
	Meningitis (not Tuberculous) .. .. .	..	1	..	..	1	..	..	..	2	..	3	..	..	2	1	1	10	..
	Convulsions .. .. .	3	2	2	..	7	6	2	3	3	3	2	..	1	..	..	..	27	..
	Bronchitis .. .. .	..	..	..	..	..	..	2	3	2	..	1	2	2	1	1	1	15	..
	Laryngitis .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
v. Other Causes.	Pneumonia .. .. .	..	..	..	..	..	1	1	..	..	1	1	1	1	2	1	1	10	..
	Suffocation, overlying .. .. .	2	..	..	..	2	..	1	..	..	..	..	..	..	..	..	..	3	..
	Other Causes .. .. .	14	2	7	5	28	4	4	1	2	1	1	2	..	1	1	..	45	3
		73	16	19	10	118	31	17	18	15	8	13	14	10	9	7	6	266	8

This is a decrease of no less than 2·09 over the rate for 1909, and is the lowest death-rate recorded in the Borough. During the last six years the rate has averaged 13·4, whilst the previous six years the average was 15·5. Derby is a working-class community, and if a death-rate of under 15 per 1,000 can be maintained, it will be a source of considerable satisfaction.

**Table shewing Infant Deaths from Immaturity since the Year 1905.**

<i>Year.</i>	<i>Total Births.</i>	<i>No. of Premature Births.</i>	<i>Deaths from Wasting Disease (Marasmus Atrophy &amp; Debility.)</i>	<i>Percentage of Immaturity Death.</i>
1905	3108	76	62	4·5
1906	3103	66	48	4·4
1907	3152	69	70	4·4
1908	3321	73	44	3·6
1909	3220	88	51	4·4
1910	3163	62	27	2·8

**Mortality in Age Groups.**—The diseases from which individuals die at different age periods show marked variation, and a consideration of these varying contributory factors is of interest.

(a) **INFANCY.**—In Table III. are set out the causes of death among children under the age of one year. These are further subdivided into the weeks of the first month of life, and figures are given for each month until the age of one year. The deaths of 266 infants were registered during the year, as compared with 391 in the previous year, and 359 in the year 1908. In the sub-division “Wasting Diseases,” no fewer than 103 of these deaths are classified; premature births and debilitated conditions contributing respectively 62 and 27. The above table shows the deaths from these two latter conditions (which two are grouped under the heading of Immaturity) during the past six years in Derby. The next highest totals are convulsions 27, and bronchitis and pneumonia 25; diarrhoea, which is usually such an important factor in this table,

accounts for 9 deaths, whilst the allied diseases, enteritis and gastritis, caused 17 deaths, as compared with 20 in the previous year.

It is satisfactory to note that there were 125 fewer deaths of infants under the age of one year, compared with the previous year, and that the infantile mortality rate (85 per 1,000 births) is the lowest recorded.

The investigation of the relationship between feeding and the mortality of infants which was begun in 1899, has been continued, and the results are recorded below:—

The total number of children which have been under observation is now 24,508. There have been registered 28,446 children between November, 1900, and December, 1909, the last member of this group attained the age of twelve months in December, 1910. From the total the following deductions must be made (*a*) on account of no visit being made, but in respect of whom no death has been registered, or (*b*) on account of no visit being made owing to death occurring before any information could be obtained, or (*c*) for the reason that the death could not have been influenced by the manner of feeding, *e.g.*, some congenital defect incompatible with life, or death taking place owing to debility and no food had been given, or (*d*) in 552 instances the child being prematurely born; a total number of deductions of 3,938. These deductions leave a net total of 24,508 children who had been under the direct observation of the women inspectors. Of this number 69% were breast-fed, 17% were wholly hand-fed, and the remaining 14% were partly reared by hand and partly by natural means. The method of feeding has a very important bearing on the probability of a child surviving to the age of one year, as will be seen from the following table:—

*Table IV.—Mortality per 1,000 from Certain Diseases among Children who were Breast-fed or Hand-fed, or who were at first Breast-fed and subsequently Hand-fed (Mixed).*

	Breast-fed.		Mixed.		Hand-fed.		All three classes.	
Number of children.	16793		3595		4115		24508	
Disease.	Number of deaths.	Death-rate per 1,000.	Number of deaths.	Death-rate per 1,000.	Number of deaths.	Death-rate per 1,000.	Number of deaths.	Death-rate per 1,000.
Bronchitis and Pneumonia .. ..	210	12.5	57	15.9	115	25.6	372	15.6
Diarrhœa and Epidemic Enteritis .. ..	101	6.0	67	18.7	201	48.9	369	15.1
Gastritis and Gastro-Enteritis .. ..	19	1.2	18	5.0	38	9.3	75	3.1
Marasmus .. ..	73	4.5	8	13.4	98	23.4	222	9.1
Atrophy and Debility	115	6.8	23	7.8	116	23.2	259	10.6
Tabes Mesenterica ..	12	0.8	3	0.8	17	4.2	32	1.3
Various Abdominal Tuberculoses ..	15	0.8	8	2.3	19	4.7	42	1.8
All other Tuberculous Diseases .. ..	40	2.3	13	4.4	23	5.6	79	3.3
Convulsions .. ..	202	12.0	56	15.6	110	26.8	368	15.1
Dentition .. ..	15	0.9	11	3.1	12	2.9	33	1.5
Zymotic Diseases other than Diarrhœa ..	74	4.4	37	10.3	39	9.5	150	6.2
All other Diseases ..	177	10.6	34	9.5	113	27.5	324	13.3
Totals .. ..	1056	62.8	383	107.5	901	218.2	2340	95.5

The death-rate amongst the breast-fed children is 62.8 per 1,000, as compared with 218.2 per 1,000 among those hand-fed, and 106.5 per 1,000 amongst those only partly breast-fed. It is important also to note that not only is this marked difference to be seen in the general death-rate, but in every classification there is the same result, the death-rate is invariably lower among the breast-fed children.

(b) OTHER AGES.—At all other ages there were registered 1,178 deaths, and of these 125 were of children between the ages of 1 and 5, 53 at the age period 5 and under 15, 49 between 15 and 25 years of age, 538 between 25 and 65, and 413 at all ages over 65. In the first of these age periods, zymotic diseases were responsible for a large number of deaths, measles causing 13 deaths, as compared with 33 in the previous year. Whooping Cough caused 8 deaths, as compared with 27 in 1909. Bronchitis and Pneumonia 10 and 19, were likewise very fatal diseases. Tuberculous diseases other than Phthisis were the cause of 19 deaths, Phthisis accounting for only 3 deaths. The age periods 5 to 15, and 15 to 25, are noted for being the healthiest, and on the former the chief contributing diseases were Diphtheria 14, and Tuberculous Disease affecting other organs than the lungs 7; on the latter, Phthisis was the most dangerous ailment, as no fewer than 18 out of the 49 deaths were assignable to that cause. This is likewise a dangerous disease at the next age period, 25 to 65, there being no less than 87 deaths, and in addition Heart Diseases contributed 93 deaths, and Cancer 63. In the declining years of life, Chest Ailments 62, Heart Diseases 51, and Cancer 30, are the chief causes of death, whilst the Zymotic Ailments become practically a negligible quantity.

**District Mortality Rates.**—In Table V. the various mortality rates which have been recorded in the different wards into which the town is divided are set out. The deaths in public institutions have been relegated to the wards to which the persons belonged before they were removed. On the basis of the general death-rate the healthiest wards were Babington 9·2, Friargate 9·7, Rowditch and Abbey 9·9 each. Dale Ward shows the highest death-rate, viz., 15·3, with King's Mead 13·4, Osmaston 12·3, and Markeaton 12·2, the next in order. The high death-rate in each of these wards is in considerable measure contributed to by the high death-rate among children. The infantile mortality in the town as a whole was 84 per 1,000 births, but in Markeaton Ward it was 120, and in Becket Ward 117. Castle Ward, which had an infantile mortality of 195 in 1909, had only 85 in 1910. Infantile mortality rates of below 84 (the average of the whole town) are noted in Abbey (80), Arboretum (65), Babington (65), Bridge (74), Derwent (55), Litchurch (75), Osmaston (78), Pear Tree (62), Rowditch (50). It is satisfactory to note that there is some improvement in the waste of infant life which is taking place in the wards just referred to. The Phthisis death-rate for the whole town was 0·9, slightly reduced from the previous year. The following wards had a Phthisis death-rate below the average of the whole town, viz., Abbey, Babington, Dale, King's Mead, Normanton, and Pear Tree Wards. The highest Zymotic rate is recorded in Dale Ward (1·3), whilst Osmaston and Normanton Wards have each a Zymotic rate of 1·2.

TABLE V.—Population, Density, Deaths, and certain Death Rates in the various Wards of the Borough of Derby for the Year 1910.

WARDS.	Population in 1901.	Estimated population in 1910.	Acreage.	Density in persons per acre.	Total Deaths.	Death-rate per 1,000 living.	Deaths from seven principal Zymotic Diseases.	Zymotic death rate.	Deaths from Respiratory Diseases exclusive of Phthisis.	Respiratory death rate.	Deaths from Phthisis	Phthisis death rate.	Number of deaths of infants under 1 year.	Deaths of infants under 1 year of age per 1,000 births.
Abbey	8,747	10,109	285	36	100	9.9	7	0.7	9	0.9	8	0.8	23	80
Arboretum	8,889	10,071	122	83	103	10.3	6	0.6	10	1.0	9	0.9	12	65
Babington	8,447	9,567	134	72	88	9.2	2	0.2	10	1.1	7	0.8	10	65
Becket	7,297	8,226	102	81	92	11.2	5	0.6	9	1.1	7	0.9	18	117
Bridge	5,081	5,815	229	26	62	10.7	4	0.7	9	1.6	6	1.1	9	74
Castle	7,786	8,884	112	80	102	11.5	5	0.6	17	2.0	9	1.1	20	85
Dale	4,785	5,562	269	21	85	15.3	7	1.3	7	1.3	4	0.8	29	114
Derwent	4,933	5,655	907	7	61	10.8	3	0.6	9	1.6	8	1.5	7	55
Friargate	8,516	9,742	176	56	94	9.7	4	0.5	12	1.3	9	1.0	22	108
King's Mead	7,064	7,997	90	89	107	13.4	6	0.8	15	1.9	6	0.8	20	111
Litchurch	8,474	9,609	462	21	100	10.4	3	0.4	13	1.4	8	0.9	12	73
Markeaton	7,200	8,232	151	55	100	12.2	7	0.9	17	2.9	10	1.2	22	120
Normanton	7,225	8,337	166	79	89	10.7	10	1.2	11	1.4	3	0.4	19	86
Osmaston	5,429	6,286	1,381	5	77	12.3	7	1.2	8	1.3	8	1.3	16	78
Pear Tree	6,930	8,050	392	21	94	11.7	8	1.0	16	2.0	6	0.8	18	62
Rowditch	8,045	9,114	354	26	90	9.9	5	0.6	11	1.2	8	0.9	9	50
*Institutions	...	...	...	...	437	...	23	...	36	...	25	...	...	..
Non-Residents	...	...	...	...	117	...	7	...	7	...	7	...	8	...
†WholeBorough	114,848	131,256	5,272	25	1,444	11.01	89	0.7	116	1.4	116	0.9	266	84

\*The deaths in Institutions have been relegated to the various Wards.

†Excluding Non-Residents.

**Bronchitis and Pneumonia.**—These two diseases were responsible for no fewer than 168 of the 1,444 deaths registered during 1910. Bronchitis was ascribed as the cause in 101 instances, and Pneumonia in 67. The corresponding figures for 1909 were 145 and 96 respectively. Of the 101 deaths due to Bronchitis, 15 occurred in children under one year of age, while 47 (nearly 50%) occurred in persons of 65 and upwards. The 67 Pneumonia deaths include 11 under one year, 19 between one and five years, 25 between 25 and 65, and only 12 at 65 and upwards. Compared with 1909, there were 73 fewer deaths from these diseases.

The general direction which preventive measures should take would appear to be in the case of Bronchitis, greater care with regard to exposure and clothing of young children and elderly persons, etc., the education of the public with respect to the possibly infectious nature of Pneumonia, and to the fact that persons with impaired constitutions, whether the result of defective home hygiene or pernicious habits, are those upon whom the pneumococcus can most readily exhibit its pathological effects. As a corollary those conditions which tend to improve physique should be encouraged. The ventilation of workrooms and places where people congregate is of great importance. Since dust in excessive amount interferes with the efficient working of the respiratory tract, it would appear desirable that dustless streets should be aimed at, and the least dust-raising methods of scavenging should be adopted. In the case of a person attacked it is obvious that careful disposal of the infected sputum is most desirable.

**Influenza.**—The only information relating to the prevalence of Influenza is to be gleaned from the death returns, and these shew that there were six deaths ascribed to this disease as compared with 14 in the previous year, 34 in the year 1908, and 23 in the year 1907. The largest number of deaths (4) was registered in the age period 25-65. There were no deaths of children under one year of age. The Ward allocation of the deaths was: Abbey, Babington, Derwent, King's Mead, Markeaton, and Pear Tree, one each.

**Cancer.**—Cancer or some variety of malignant disease was held responsible for 95 deaths as compared with 96 in 1909, 107 in 1908, 114 in 1907, and 92 in 1906. There was one death from this disease below the age of 5 years, one between 5 and 25, whilst the following two age periods had respectively totals of 63 and 30. Arboretum and Rowditch Wards, with 12 and 11 respectively, showed the highest ward mortalities. In Bridge and Pear Tree Wards there were only two deaths from this disease.

**Violence.**—There were 66 deaths attributed to violence as compared with 55 in 1909, 56 in 1908 and 1907. Fifty-seven of these cases were accidents, and 9 were cases of suicide. These totals compare with 47 and 8 respectively in the previous year. Thirteen of the cases of accident were of children under the age of 5 years, and 23 occurred amongst people aged from 25 to 65, this, of course, being the period of activity when risks, whether occupational or otherwise, are most common. Four of the 9 cases of self-inflicted death occurred under the age of 25.

**Other Diseases.**—There were 162 deaths from heart diseases, compared with 188 in 1909; of these 144 were over the age of 25. The highest number was 17 in Rowditch Ward, followed by 15 in Becket and Litchurch Wards, and 14 in Abbey Ward. Of the 15 deaths from alcoholism and cirrhosis of the liver, there were none below the age of 25. Of the 62 deaths registered as due to prematurity, 8 occurred in Osmaston Ward. There were 6 deaths attributable to “accidents of parturition,” as compared with 8 in 1909.

**Inquests.**—I am informed by the Borough Coroner that the number of Inquests held by him during the year ended December 31st, 1910, was 198, being made up of 124 held on males and 74 on females. There were no unregistered deaths in the Borough; the cause of every death was certified either by a medical practitioner or by the Coroner.

**Mortuary.**—The Coroner’s Officer, Mr. John Payne, informs me that the number of dead bodies which were received into the Mortuary during 1910 was 18, and that four post-mortem examinations were conducted in the building during the year.

### THE NOTIFICATION OF INFECTIOUS DISEASES.

The total number of cases of infectious diseases notified during 1910, in accordance with the requirements of the Infectious Diseases Notification Acts, was 1,163, as compared with 989 in the previous year, 960 in 1908, and 1,095 in 1907. The increased number of notifications in 1910 as compared with recent years is due to the greater prevalence of Scarlet Fever. In addition there were 131 cases of Phthisis notified under the Tuberculosis Regulations and voluntarily; also 514 cases of Measles, 85 cases of Whooping Cough, 129 cases of Varicella, and 367 cases of Mumps notified by school teachers.

The highest and lowest weekly incidences were as follows:—

Week ending.		Cases Notified.	
23rd April, 1910	... highest number	...	41
17th August, 1910	... lowest number	...	10

The following summary gives particulars of these various diseases : —

Cases of Infectious Disease notified during 1910.

Quarters.	Totals.	Small Pox.	Scarlet Fever.	Diphtheria.	Continued Fever.	Enteric Fever.	Erysipelas.	Puerperal Fever.	Membranous Croup. (See Diphtheria.)
First ...	314	...	168	108	...	11	26	1	...
Second	306	...	194	82	...	3	23	4	...
Third ...	226	...	143	56	...	8	17	2	...
Fourth...	317	...	168	112	1	6	29	1	...
Year....	1163	...	673	358	1	28	95	8	...

Table VI. gives information respecting the notification of infectious diseases in previous years. It will be observed that the number notified in 1910 was rather more than that for the previous year (989), although it is satisfactory to note that the number of cases of Diphtheria is considerably less than in the previous year.

RETURN of the number of cases of Infectious Disease reported to the Medical Officer of Health during the year 1910, and of deaths from the diseases notified.

	<i>Cases notified in 1910.</i>	<i>Deaths registered in 1910.</i>
Small-pox ... ..	...	...
Scarlatina or Scarlet Fever ... ..	673	4
Diphtheria (including Membranous Croup) ... ..	358	22
Typhus Fever ... ..	...	...
Enteric or Typhoid Fever ... ..	28	7
Continued Fever ... ..	1	...
Relapsing Fever ... ..	...	...
Puerperal Fever ... ..	8	4
Cholera ... ..	...	...
Erysipelas ... ..	95	2
Plague ... ..	...	...
Phthisis ... ..	131	116

In dealing with these cases the following action was taken:—

	Quarters.				
	First.	Second.	Third.	Fourth.	Totals.
Number of visits made by Inspectors	582	992	531	797	2902
Cases isolated. Borough Hospital:—					
Scarlet Fever ... ..	81	120	108	111	420
Diphtheria ... ..	67	54	38	45	204
Cases isolated. Royal Infirmary:—					
Diphtheria ... ..	...	...	...	1	1
Enteric Fever ... ..	8	...	5	4	17
Puerperal Fever ... ..	...	2	...	1	3
Cases isolated. Children's Hospital					
Diphtheria ... ..	...	...	...	2	2
Cases willing to be isolated but for which no room could be found ...	7	24	7	14	52
Cases in which isolation was delayed	8	37	29	32	106
Number of rooms disinfected ...	321	339	267	275	1202
„ classrooms „ at the various schools within the Borough ... ..	79	115	75	75	344

**Steam Disinfection.**—A small portable Steam Disinfector was purchased during the year, and a small building erected at the rear of the Health Offices to accommodate this; two small rooms are available, one for infected articles, and the other for dealing with these articles after disinfection. This arrangement has proved of great value, and serves to relieve the pressure upon the use of the large Steam Disinfector at the Hospital.

TABLE VI.--Number of cases of Infectious Disease notified in the Borough of Derby during 1910, and in each year since 1881.

DISEASES.	'81	'82	'83	'84	'85	'86	'87	'88	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
Small Pox ...	46	15	2	7	...	...	...	20	...	5	...	11	52	3	94	1	1	...	...	1	1	8	48	210	123	...	...	...	...	...
Scarlet Fever	423	770	506	389	232	167	64	756	775	346	318	470	501	513	364	427	432	481	885	602	616	332	185	638	535	290	181	116	210	67
Dysentery ...	6	10	8	...	1	6	27	23	46	81	66	67	50	46	43	45	57	74	60	52	74	63	83	150	271	561	606	670	653	35
Erysipelas } Membranous } Erysipelas }	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	...	...	...	...
Measles & Con. } Scarlet Fever }	95	113	51	344	57	162	105	163	99	64	66	55	111	104	99	104	125	159	141	125	114	85	64	64	44	71	74	39	13	2
Typhoid Fever	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Typhus	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	6	6	7	11	2	1	1	3	5	1	8	9	11	7	10	3	3	6	8	7	10	13	14	16	13	11	7	15	9	...
Epidemic Typhus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	67	52	88	135	138	89	113	128	120	104	9
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	56	105	103	82	111	99	108	127	13
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals ...	577	914	574	751	292	336	197	965	925	497	458	612	727	673	610	580	618	720	1094	854	867	645	634	1319	1158	1160	1095	1068	1116	12

In addition to the above, the following cases of Measles were also notified during short periods of voluntary notification :—1884, 513 cases; 1887, 874 cases; 1888, 33 cases; also 34 cases of Scarlet Fever, and 3 cases of Enteric Fever from the annexed areas during 1901.

\* Phthisis became a notifiable (voluntarily) disease in July, 1902

TABLE VII.—Cases of Infectious Diseases notified by the Teachers in the various Schools within the Borough.

SCHOOL.	Scarlet Fever.	Measles.	Chicken pox.	Diph- theria.	Mumps.	Whoop- ing Cough.	Sore Throats	Ring Worm.	Various.
Ashbourne Road..	31	7	1	1	93	1	35	25	10
Brighton Road ..	—	2	—	—	—	19	33	—	1
Firs Estate .. ..	—	—	—	—	—	1	3	—	—
Clarone Road ..	12	117	13	5	46	2	2	16	91
Gerard Street ..	2	1	9	1	12	7	13	5	—
Nuns Street ..	—	40	—	—	1	—	16	—	1
Nottingham Road	1	—	7	—	48	—	6	1	—
Orchard Street ..	—	—	—	—	—	—	—	1	1
Osmaston .. ..	—	1	—	—	—	11	—	10	—
Pear Tree Council	4	65	16	6	40	22	6	4	4
St. James' Road..	12	12	—	6	16	2	21	59	23
Traffic Street ..	6	11	28	9	12	—	3	5	2
All Saints' ..	—	5	—	—	2	—	—	—	—
Canal Street ..	—	—	—	—	1	1	—	—	—
Christ Church ..	4	—	—	2	—	—	—	—	—
Curzon Street ..	2	9	1	2	3	—	—	7	—
Parliament Street	—	—	—	—	—	—	—	—	—
Pear Tree Mission	8	—	1	1	14	1	—	—	—
Practising ..	—	11	2	—	13	—	—	2	—
St. Alkmund's ..	—	1	—	—	1	—	3	1	—
St. Andrew's ..	3	46	1	—	—	8	—	1	1
St. Anne's ..	1	—	3	—	—	—	—	—	—
St. Chad's ..	5	21	3	—	11	—	2	—	—
St. Dunstan's ..	3	86	1	2	1	1	—	7	1
St. James' Church	1	13	1	—	5	—	—	—	1
St. John's ..	—	47	8	—	6	—	—	—	—
St. Joseph's ..	—	5	2	—	12	1	—	4	2
St. Luke's ..	2	—	28	—	1	4	1	7	1
St. Mary's ..	—	—	—	—	—	—	—	—	1
St. Paul's ..	1	6	—	—	14	2	3	4	3
St. Peter's ..	—	1	1	—	—	2	—	1	—
St. Thomas' ..	—	—	1	—	15	—	—	1	—
Ked'leston Road ..	2	7	2	—	—	—	—	—	—
Special .. ..	3	—	—	—	—	—	—	—	—
Total ..	103	514	129	35	367	85	147	161	143

**School Notification of Infectious Diseases.**—The notification of cases of infectious diseases by the Head Masters and Mistresses to the Medical Officer of Health has continued. In the year under review the number of cases so notified was 1,684, as against 1,451 in 1909 and 638 and 2,256 in 1908 and 1907 respectively. The enormous difference in these totals is due to the fact that 1907 was a “Measles” year, and to the aggregate that disease alone contributed 1,621 cases, as against 278 in 1908, and 14 in the year 1906.

The number of cases of Measles notified in 1910 was 514. This very fact alone shows the extent to which this disease interferes with school work, and any action, therefore, which can be taken to limit its extension should be taken advantage of. The number of Scarlet Fever cases which have been notified was 103, as against 31 in 1909, 15 in 1908, 24 in 1907, and 29 in 1906; the cases of Chicken-pox were fewer, while cases of Diphtheria decreased from 87 to 35 (see Table VII.).

### Mortality from Zymotic Diseases.

Zymotic Mortality during the past seven years.

Years.	Ten Years' Average.	1904	1905	1906	1907	1908	1909	1910
Rate per 1,000	1·66	1·4	1·5	1·6	1·8	1·1	1·4	0·7

The total deaths registered as occurring within the Borough from this class of disease was 89, as compared with 177 in 1909, 134 in 1908, and 220 in 1907. These 89 deaths are equivalent to a death-rate of 0·7 per 1,000 of the population. The decrease in the number of the total deaths from Zymotic Diseases is due to the decreased numbers of deaths from Diphtheria, Diarrhœa, Whooping Cough, and Measles. There was a decrease in number of deaths from Measles of 31; Whooping Cough deaths were fewer by 29, Diarrhœa by 22, and Diphtheria by 11, than the respective numbers for 1909. The diseases which are included under this total, and which are usually designated the seven principal Zymotic Diseases, are Smallpox Measles, Scarlet Fever, Whooping Cough, Diphtheria, Enteric Fever, and Diarrhœa. Each of these diseases will receive separate consideration. The comparison of the mortality with previous years is set out in the above tabulation.

### SMALLPOX.

Mortality from Small Pox during the past eight years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908	1909	1910
Rate per 1,000.	0·01	0·02	0·03	0·02	nil.	nil.	nil.	nil.	nil.

No case of Smallpox was notified during the year 1910, the last case treated in the wards of the Borough Hospital was discharged on September 25th, 1905.

**Vaccination.**—I am indebted to Mr. A. E. Morgan, the Vaccination Officer of the Derby Union, for the following particulars relating to Vaccination for the year 1910, and also for the five preceding years :—

	1904	1905	1906	1907	1908	1909	1910
Births .. ..	3318	3129	3143	3188	3309	3145	3184
Deaths of Unvaccinated Children ..	483	380	309	383	264	294	213
Insusceptible and Postponed Cases	1	24	25	47	48	27	20
Successfully Vaccinated ..	1394	856	407	497	445	326	250
Conscientious Objection Certificates ..	218	439	284	363	971	956	908

The above table, showing the small proportion of successfully vaccinated children to the total, and the increase in the number of conscientious objection certificates, shows a very unsatisfactory state of things, and one calculated to cause very considerable anxiety as to the results of the next invasion of Smallpox, especially in the absence of special hospital accommodation for Smallpox in the Borough.

### SCARLET FEVER.

Cases Notified	...	...	...	673
Deaths	...	...	...	4
Case Mortality	...	...	...	0·59

Mortality from Scarlet Fever during the past eight years.

Years.	Ten Years' Average.	1903	1904	1905	1906	1907	1908	1909	1910
Rate per 1,000.	0·07	0·07	0·03	0·09	0·04	0·03	0·015	0·03	0·03

The number of cases of Scarlet Fever notified during 1910 was 673, an increase of 463 upon the number for 1909, and the highest number notified since 1899. As regards the distribution of the disease, it was most prevalent in Friar Gate Ward, with 138 notified cases; of this number 32 cases occurred in the Railway Servants' Orphanage. Abbey and Normanton Wards each had 49 cases, followed by Markeaton Ward 46, Osmaston Ward 42, and Arboretum Ward 41. The lowest number was notified in Derwent Ward 22, Castle Ward following with 25, and Becket Ward 27. The number of deaths from Scarlet Fever was four only, giving a mortality rate of 0·03. The four fatal cases occurred in persons resident of Abbey, Friar Gate, Markeaton, and Osmaston Wards. The extreme mildness of the type of the disease is proved by the low case fatality, and the general mortality compares, as would be expected, most favourably with the 10 years' average in this town, and with that recorded in the great towns (0·08) and in the country as a whole (0·06).

As regards age incidence of notifications, the great proportion, 467 out of 673, were of children at school age, viz., 5 to 15, whilst of the remaining 206 cases, 124 were attacks of children between the ages of 1 and 5. There were 240 of the cases removed to the Borough Isolation Hospital for treatment. The ages of the four fatal cases were respectively 2 years, 4 years, 7 years, and 11 years. Two of the fatal cases were suffering from burns, the latter contributing to no small degree to the fatal termination, for it is quite possible (in fact, probable) that but for the effects of the burns both children would have recovered. Notwithstanding the inclusion of these two deaths, the case-mortality (0·59) is exceptionally low.

TABLE VIII.—SCHOOLS AND SCARLET FEVER.

				Average Attendance.	Scarlet Fever Cases.	Incidence per 1000 Attendances.
Ashbourne Road	..	..		1584	126	79·54
Brighton Road	..	..		809	18	22·24
Clarence Road	..	..		647	16	24·73
Firs Estate	..	..		1422	24	16·87
Gerard Street	..	..		851	14	16·45
Nottingham Road	..	..		249	3	12·04
Nun Street	..	..		629	17	27·02
Orchard Street	..	..		345	5	14·5
Osmaston	..	..		426	10	23·47
Pear Tree	..	..		964	18	18·66
St. James' Road	..	..		1478	38	25·71
Traffic Street	..	..		965	9	9·32
Hastings Street H. G.	..	..		350	1	2·85
Kedleston Road	..	..		626	3	4·79
All Saints'	..	..		353	8	22·66
Canal Street	..	..		285	3	10·52
Christ Church	..	..		452	8	17·7
Curzon Street	..	..		320	2	6·25
Parliament Street	..	..		187	4	21·39
Pear Tree Mission	..	..		228	1	4·38
Practising	..	..		354	5	14·12
St. Alkmund's	..	..		216	2	9·25
St. Andrew's	..	..		514	18	35·01
St. Anne's	..	..		438	7	15·98
St. Chad's	..	..		518	8	15·44
St. Dunstan's	..	..		519	1	1·92
St. James' H. G.	..	..		766	19	24·80
St. John's	..	..		472	5	10·60
St. Joseph's	..	..		283	10	35·33
St. Luke's	..	..		545	3	5·50
St. Mary's	..	..		407	17	41·76
St. Paul's	..	..		493	9	18·25
St. Peter's	..	..		394	5	12·7
St. Thomas'	..	..		142	1	7·04
Special	..	..		78	2	25·62

## DIPHTHERIA.

Cases Notified	...	...	...	358
Deaths	...	...	...	22

Mortality from Diphtheria during the past eight years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908	1909	1910
Rate per 1,000.	0·23	0·07	0·25	0·19	0·52	0·42	0·28	0·25	0·16

Diphtheria was again prevalent within the Borough during 1910, although the number of cases (358) is considerably smaller than the number notified in 1909 (653). The number of deaths (22) is 11 fewer than the number of fatal cases in 1909.

Included in the 358 cases are (a) 234 cases notified by Medical men in the town on clinical symptoms only; (b) 85 cases notified on the results of bacteriological examinations of throat swabs taken by doctors in the town; and (c) 39 cases discovered by the Officers of the Health Department in school or in the homes of the people, chiefly the "close contacts" of notified cases.

<i>Quarterly Incidence.</i>	Cases.		Deaths.	
First Quarter	...	108	...	10
Second „	...	82	...	2
Third „	...	56	...	5
Fourth „	...	112	...	7

<i>Monthly Incidence.</i>	Cases.		Deaths.	
January	...	38	...	4
February	...	37	...	5
March	...	33	...	1
April	...	33	...	0
May	...	30	...	1
June	...	19	...	1
July	...	13	...	1
August	...	26	...	2
September	...	17	...	0
October	...	27	...	3
November	...	41	...	3
December	...	41	...	1
Totals	...	358	...	22



1910.

Week Ending	Jan 8 22	Feb. 5 19	Mar. 5 19	April 2 16 30	May 14 28	June 11 25	July 9 23	Aug. 6 20	Sep. 3 17	Oct. 1 15 29	Nov. 12 26	Dec. 10 24
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DIPHTHERIA, 1910.

Weekly Incidence.

.. Cases discovered by bacteriological means, including "contacts and carriers."

.. Cases Notified.

.. Deaths.

0  
Total  
Cases.

**Weekly Incidence.**—This is indicated in the accompanying chart. The highest number of cases notified in one week was 12, in the week ending January 29th; and the greatest number of deaths in one week was two, in the following weeks 8th and 29th January, 12th February, and 5th November.

**Ward Distribution.**—

Ward.			Cases.		No. Isolated.		Total Deaths.
Abbey	...	...	25	...	21	...	1
Arboretum	...	...	28	...	10	...	2
Babington	...	...	23	...	13	...	1
Becket	...	...	25	...	16	...	2
Bridge	...	...	13	...	8	...	2
Castle	...	...	10	...	5	...	0
Dale	...	...	20	...	14	...	1
Derwent	...	...	16	...	10	...	0
Friar Gate	...	...	39	...	17	...	2
King's Mead	...	...	14	...	10	...	0
Litchurch	...	...	16	...	8	...	1
Markeaton	...	...	22	...	15	...	0
Normanton	...	...	33	...	16	...	2
Osmaston	...	...	19	...	7	...	3
Pear Tree	...	...	38	...	21	...	1
Rowditch	...	...	17	...	13	...	4
			<hr/>		<hr/>		<hr/>
			358		204		22
			<hr/>		<hr/>		<hr/>

**Fatality.**—

The 22 deaths among the 358 notified cases gives a case-mortality of 6·14, which is practically the same as that for 1909. Twelve of the deaths took place at the Isolation Hospital. The mortality per 1,000 of the population is 0·16, as compared with a rate of 0·12 for the seventy-six great towns,

**Age and Sex.**—Twelve of the fatal cases were females, and 10 males. The age periods were as follows:—

1 to 2 years	...	...	1 death.
2 to 3 „	...	...	2 deaths.
3 to 4 „	...	...	3 „
4 to 5 „	...	...	2 „
5 to 6 „	...	...	4 „
6 to 7 „	...	...	6 „
7 to 8 „	...	...	1 death.
8 to 9 „	...	...	3 deaths.

In two of the fatal cases tracheotomy had been previously performed; in one case at the Children's Hospital, and in the other case at the Borough Isolation Hospital. In one instance a girl two years old died in the Children's Hospital, the cause of death being certified as Post Diphtheritic Paralysis.

**Schools Attended by the Fatal Cases.**—Eleven of the children were not attending school, the remainder attended school as follows:—Brighton Road (two) Ashbourne Road, Firs Estate, Parliament Street, Pear Tree Council, St. Chad's, St. Thomas', St. James', St. Luke's, and Curzon Street (one each).

**Antitoxin.**—In the case of 16 of the fatal cases no Antitoxin had been administered, while in six only was Antitoxin given, to three of these two days before death, and to three of them one day before death. Obviously the Antitoxin was given too late in these latter cases.

There were 33 deaths from Diphtheria in 1909, 36 in 1908, and 64 in 1906. There is, therefore, a satisfactory tendency to reduction in the number of deaths from this disease in Derby.

It will be noted then that all the wards were affected, the greatest number of cases occurring in Friar Gate Ward, and the greatest number of deaths in Rowditch Ward.

**Age Periods:**—

Under 1 year	...	25 Cases	...	0 Deaths.
1 to 5 years	...	90 „	...	8 „
5 to 15 years	...	180 „	...	14 „
15 to 25 years	...	38 „	...	0 „
25 to 65 years	...	25 „	...	0 „

It will be seen then that the most fatal age of attack is between 5 and 15 years, but most deaths at one age occurred between the ages of 5 and 6 years, viz., 10.

### Sex Distribution:—

The numbers shew a preponderance of females, the total, 358, including 152 males and 206 females.

### Infected Households.

In 237 instances one case only occurred in a house	...	237
33     ,,     two cases     ,,     ,,	...	66
8     ,,     three cases     ,,     ,,	...	24
3     ,,     four cases     ,,     ,,	...	12
1 instance five cases     ,,     ,,	...	5
1     ,,     six cases occurred in Railway Servants' Orphanage	...     ...     ...     ...	6
1     ,,     eight cases occurred in Deaf and Dumb Institution	...     ...     ...     ...	8
<hr/> Totals 284 houses		<hr/> Cases 358 <hr/>

### Second Attacks.

One of the cases had suffered from Diphtheria twelve months previously, one six months previously, and a third discharged from Hospital two months previously was found to have Diphtheria bacilli in the throat.

**Previous Cases in Household.**—In 23 families previous cases of Diphtheria had occurred within periods of 2-3 months to four years.

- (1) In one household a case had occurred 2-3 months previously.
- (2)             ,,             ,,             ,,             3-4             ,,             ,,
- (3) In two households cases     ,,             7-8             ,,             ,,
- (4) In one household a case     ,,             10             ,,             ,,
- (5) In six households cases     ,,             12             ,,             ,,

(6)	In one household a case had occurred 14 months previously.					
(7)	„ „ „	16	„	„		
(8)	„ „ „	18	„	„		
(9)	„ „ „	22	„	„		
(10)	„ „ „	2 years		„		
(11)	„ „ „	2 yrs. 8 mons.		„		
(12)	„ „ „	3 years		„		
(13)	„ „ „	3½ years		„		
(14)	„ „ „	4 years		„		
(15)	In three households cases „	at times not recorded.				

**Occupation.**—183 of the 358 cases were school children, *i.e.*, 51·1% ; 115 were children below school age. Among the remaining 125 cases there was no special indication that any particular occupation was a factor in the spread of the disease. It is interesting to note that none of the men employed in the ashpit department (the number of these, including carters and depôt men, is over 100) suffered from Diphtheria, and in only one instance did Diphtheria occur in the household of a man employed in this department. Similarly none of the men employed in cleansing the sewer manholes were attacked by this disease.

**School Influence.**—The 191 school children attended 35 Public Elementary Schools within the Borough, two Public Elementary Schools outside the Borough, and four private schools. The following table gives the number of cases of Diphtheria attending each of the Public Elementary Schools, with the incidence per 1,000 attendances. With the exception of the Nottingham Road and Canal Street Schools, every Public Elementary School had one or more cases of Diphtheria among its scholars during 1910.

TABLE IX.—SCHOOLS AND DIPHTHERIA.

			Average Attendance.	Diphtheria Cases.	Incidence per 1,000 attendances.
Ashbourne Road	..	..	1584	11	6·95
Brighton Road	..	..	809	8	9·88
Clarence Road	..	..	647	9	13·91
Firs Estate	..	..	1422	7	4·92
Gerard Street	..	..	851	10	11·75
Nottingham Road	..	..	249	0	—
Nun Street	..	..	629	5	7·94
Orchard Street	..	..	345	1	2·9
Osmaston	..	..	426	2	4·69
Pear Tree Council	..	..	962	32	33·26
St. James' Road	..	..	1478	8	5·41
Traffic Street	..	..	965	3	3·10
Hastings Street	..	..	350	4	11·42
Kedleston Road	..	..	636	2	3·19
All Sain's'	..	..	353	2	5·66
Canal Street	..	..	285	0	—
Christ Church	..	..	452	4	8·84
Curzon Street	..	..	320	4	12·5
Parliament Street	..	..	187	1	5·34
Pear Tree Mission	..	..	228	6	26·31
Practising	..	..	354	2	5·65
St. Alkmund's	..	..	216	3	13·88
St. Andrew's	..	..	514	3	5·83
St. Anne's	..	..	438	8	18·26
St. Chad's	..	..	518	9	17·37
St. Dunstan's	..	..	519	4	7·70
St. James' H. G.	..	..	766	11	14·36
St. John's	..	..	472	4	8·47
St. Joseph's	..	..	283	4	14·13
St. Luke's	..	..	545	2	3·66
St. Mary's	..	..	407	3	7·37
St. Paul's	..	..	493	7	14·18
St. Peter's	..	..	394	2	5·07
St. Thomas'	..	..	142	1	7·04
Special	..	..	78	1	12·82

**Defective Drains and other Nuisances.**

Obvious nuisances were discovered in 12 houses only. In 5 instances the drains were found to be either defective or choked. Insanitary conveniences were found in three cases, one house was overcrowded, damp walls in one, pump out of repair at one house, paving of house floor defective in one case, and in one instance the ceiling required limewashing.

### **Milk Supply.**

In no case could the attack of Diphtheria be traced to the milk supply.

### **Type of the Disease.**

Generally speaking, the disease was of a mild type, but in a few instances it took an insidious and toxic character. In two cases, both fatal, the parents had treated the patients as suffering from Mumps.

Cases of the laryngeal, or "croupy" type, were relatively rare, A few cases were of the "nasal" type.

### **History of Diphtheria in Derby.**

The following table shews that Diphtheria has been very prevalent in Derby during the past five years, 1906-10; it was moderately prevalent in 1905, while the year 1904 shewed a number of cases considerably in excess of the preceding year. The average number of cases notified during the five years 1906-10 was 569·8; while the average number notified during the preceding five years was 129·4. The numbers of notifications for the years 1909-1910 are not comparable, however, with the numbers of notifications for previous years, since, in the latter two years, all cases discovered by bacteriological means (contacts and others) to have Diphtheria bacilli in the fauces are included. The average annual number of deaths for the last five years was 41·4, and for the preceding five years it was only 17·4.

The four years 1889-1892 shew an average of 19 deaths annually, and the high case-mortality would seem to suggest that many true cases of Diphtheria were not recognised at that time. Nevertheless, it will be observed that at no five yearly period has Diphtheria been so prevalent as during the quinquennium 1906-10.

## DIPHTHERIA IN DERBY, 1881-1910 (inclusive).

<i>Year.</i>	<i>Cases of Diphtheria Notified.</i>	<i>Case Incidence per 1 000 of the Population.</i>	<i>Deaths.</i>	<i>Case Mortality per cent.</i>
1881	6	0·08	2	33·3
1882	10	0·13	3	30·0
1883	8	0·10	1	15·5
1884	1	0·02	1	..
1885	1	0·02	0	nil.
1886	6	0·07	2	33·3
1887	27	0·31	7	26·0
1888	23	0·26	7	30·5
1889	46	0·51	19	41·4
1890	81	0·87	20	24·7
1891	66	0·71	17	25·8
1892	67	0·71	20	29·9
1893	50	0·52	6	10·8
1894	46	0·47	5	10·9
1895	43	0·44	6	14·0
1896	45	0·45	10	22·2
1897	57	0·57	9	15·8
1898	74	0·73	9	12·2
1899	60	0·58	8	13·3
1900	52	0·41	7	13·5
1901	74	0·70	20	27·6
1902	63	0·54	12	19·0
1903	83	0·70	3	3·6
1904	150	1·25	29	19·4
1905	277	2·27	23	8·3
1906	562	4·50	64	11·3
1907	606	4·81	52	8·8
1908	670	5·25	36	5·5
1909	653	5·04	33	5·0
1910	358	2·72	22	6·1

### Measures taken for Checking the Spread of the Disease.

The routine measures adopted for dealing with Diphtheria cases have been fully dealt with in former annual reports, and there is no need to repeat them. It may be mentioned, however, that during the year 1910 much use was again made of—

- (1) Hospital Isolation, and of
- (2) Bacteriology.

(1) In 1910 the number of cases of Diphtheria removed to Hospital was 204, as compared with 376 in 1909 and 216 in 1908.

(2) Bacteriology was very largely used for the diagnosis of Diphtheria during the year, and for the purpose of releasing a Diphtheria patient from isolation. The number of throat swabbings examined bacteriologically in 1910 was 4,990, as compared with 5,310 in 1909 and 538 in 1908. A detailed summary of the work done in the Hospital Laboratory is given in the Hospital report.

**Schools.**—Special attention was paid to the condition of the throats of school children, and no child from an infected household was allowed to return to school until bacteriological examination of the throat swab shewed the absence of the Klebs-Löffler bacillus. After the notification of Diphtheria in a school child, the school last attended by the patient was at once visited, and all members of the class examined for suspicious symptoms; throat swabbings were taken of all shewing these symptoms, and usually of a dozen or so of the children who sat nearest to the patient, and also of any special playmate. Careful enquiry was made as to the absentees from illness, and these visited if thought advisable, and throat swabs taken unless a doctor were in attendance.

A detailed summary of the bacteriological examination of throat swabs of school children is given on pages 66 to 69.

**School Notification.**—The Head Teachers of all the Public Elementary Schools in the town were notified of the arrangements for excluding the “close contacts” of Diphtheria patients (children living in infected households) from attending school until certified free from infection. The teachers also gave considerable assistance in notifying the Health Department of the existence in school children of cases with suspicious throat symptoms, either attending school or absent from this alleged cause.

**Antitoxin.**—Antitoxin was supplied gratuitously to the medical men practising in Derby. 64 phials, each containing 2,000 units, were supplied in Derby in 1910. In the majority of the cases admitted to the Hospital in 1910, Antitoxin had not been previously given.

**Removal of Sanitary Defects.**—As far as possible all the sanitary defects mentioned above were remedied.

**Persistence and Spread of the Disease.**—As mentioned in previous reports, the chief factors in the spread of Diphtheria in Derby have been the many mild and unrecognised cases which have occurred. The disease has tended to disappear completely from some portions of the Borough for several months and then to again appear. In these latter instances it is usually found that some unrecognised case of Diphtheria had occurred, with slight symptoms, and with no medical attendance. If this case happened to a school child further spread of infection readily took place.

A very interesting case occurred during the year, which seemed to show that a dog had been the carrier of the infection. The latter was sent to the Health Office by the owner, asking our opinion as to whether the dog was not suffering from Diphtheria, the owner's wife and child being then Diphtheria patients in the Isolation Hospital. A swabbing was taken of the dog's throat and found to contain Klebs-Löffler bacilli. The animal was then destroyed. The dog was of a retriever type, but had been used as a house dog and playmate for the child. A case of Diphtheria, previous to the occurrence of the cases of Diphtheria in the house of the owner of the dog (child and wife), had occurred in the same street, a playmate of the former child. The dog was a pet of both these children, and may have been the carrier of infection between the two, although there is, of course, the possibility of a more direct contact between the two children, but no evidence of recent contact between the two children could be obtained at the time. It was also elicited that the dog had been a frequent companion of a boy who acted as butcher's errand boy, who had had some acute throat symptoms previously, which were treated as Tonsillitis. It is quite probable that this boy really had Diphtheria, and then the infection was transmitted by the dog (who frequently licked the faces of the children), to one or other of the children mentioned above.

An instance of prolonged persistence of infection of a nasal case might also be referred to. This case was mentioned on p. 57 of the Annual report of 1909, and in spite of frequent and persistent douching with various antiseptics, virulent Klebs-Löffler bacilli was found in the nasal discharge for over 12 months. The tests for virulence were made by Professor Delépine at the Public Health Laboratory, Manchester.

ENTERIC FEVER.

Cases Notified	...	...	...	28
Deaths	...	...	...	7

There were 28 cases of Enteric Fever notified during the year, and one case of " Continued Fever," as compared with 13 cases of Enteric Fever notified in 1909.

Mortality :—

Percentage Case Mortality	...	...	25
Mortality per 1,000 of Population	...	0·054	
„	„	(77 great towns)	0·05

Mortality from Enteric Fever during the past eight years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908	1909	1910
Rate per 1,000.	0·08	0·06	0·05	0·08	0·10	0·15	0·031	0·015	0·054

Eighteen of the cases were treated in the Derbyshire Royal Infirmary, one was a nurse of the Workhouse Infirmary, nine cases were treated at home, and one case died before investigation.

The number of cases notified is an increase of 15 compared with the preceding year. The mortality-rate, 0·054, equals that of the 77 great towns. In 1909 there were 13 cases notified with two deaths (case mortality 10·3). In 1908 there were 39 cases notified with four deaths (case mortality 10·3); in 1907, 74 cases notified with 18 deaths (case mortality 24·3; in 1906 there were 70 cases, deaths 11, and case mortality 15·7%.

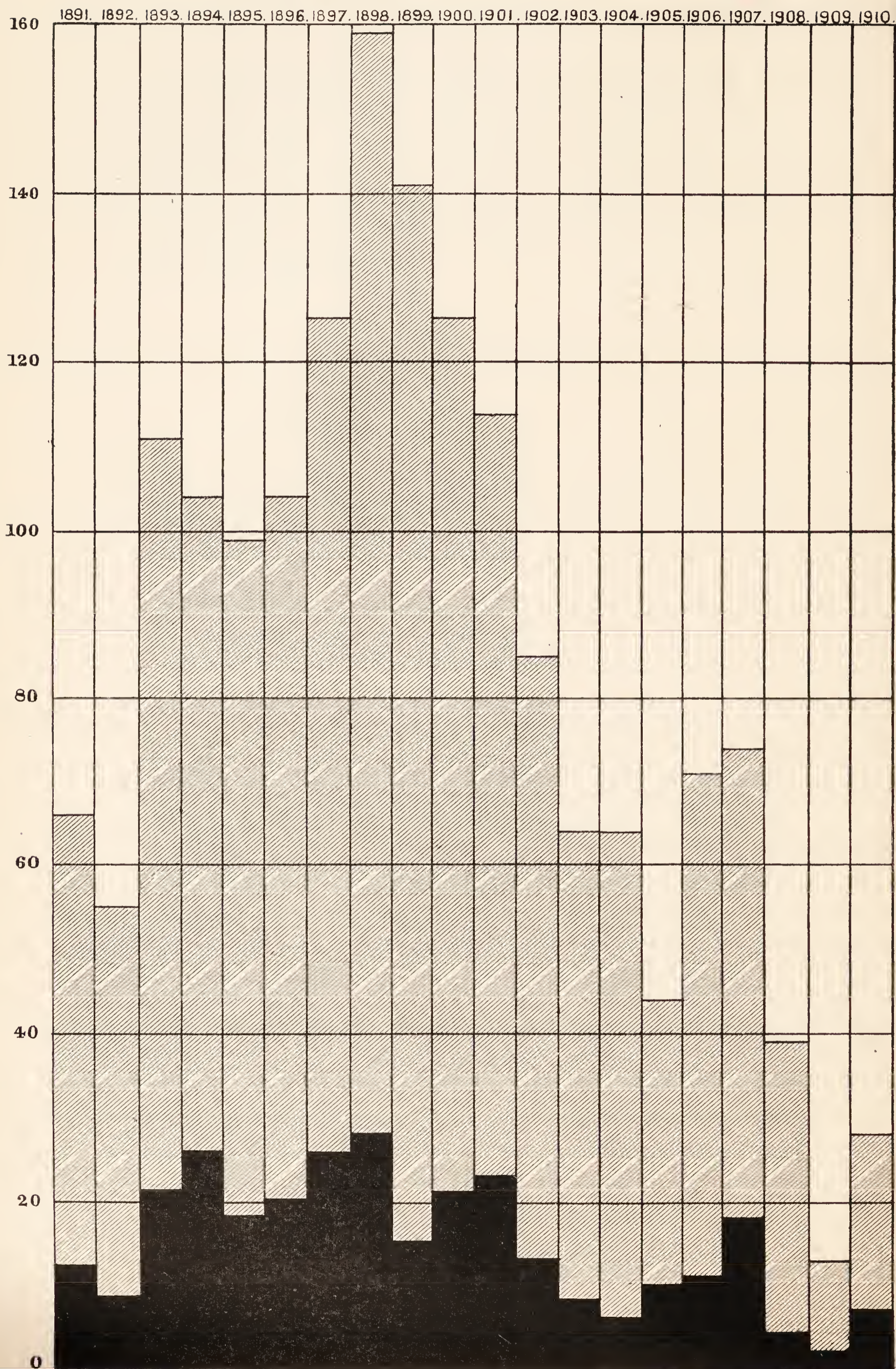


# ENTERIC FEVER IN DERBY 1891-1910.

Cases Notified.



Deaths.



**Age and Sex Distribution :—**

There were 9 males and 19 females.

<i>Age Periods.</i>				Cases.	Deaths.	
0-5 years	...	...	...	0	...	0
5-15 years	...	...	...	7	...	1
15-25 years	...	...	...	6	...	2
25-65 years	...	...	...	13	...	4
65 years and upwards...	...	...	...	2	...	0

**Ward Distribution.**—There were 6 cases notified in Castle Ward, 3 each in Normanton, Markeaton, Osmaston, and Rowditch Wards ; 2 each in Babington, Bridge, and Derwent Wards ; and one each in Becket, Friar Gate, King's Mead, and Pear Tree Wards. No cases were notified in Abbey, Arboretum, Dale, and Litchurch Wards.

**Causation.**—As in previous years, the cases have been classified in groups according to probable cause or the absence of any ascertained source of infection. It will be noticed that in ten cases there was no clue to infection, seven cases were directly attributed to personal infection, and probably four other cases, whilst seven cases were possibly associated with some article of diet.

A satisfactory feature is the fact that in no case was a serious sanitary defect found in connection with the residence of the patient.

**Blood Examination.**—In fifteen instances the blood of suspected Typhoid patients was examined for Widal's reaction. In seven cases positive reactions were obtained, of the remaining eight cases negative results were found in seven instances, while one gave a doubtful reaction. All the positive cases were notified on receipt of the result of the blood examination.

**Special Precautions.**—A “ Typhoid Pail ” is provided for the reception of the excreta of patients treated at houses where no water-closet is provided. These are periodically removed, the contents cremated at the destructor, and cleansed. When a case occurs in a house provided with a tub closet, the latter is removed and burnt in the destructor, a new tub being substituted. The seats of all sanitary conveniences connected with Typhoid infected houses

are cleansed and disinfected with chloros. Gulleys are cleaned out and the drains flushed in the more populous centres, also courts and alleys in the immediate proximity are cleansed and washed by members of the Borough Surveyor's staff.

*Continued Fever.*

A case of continued fever occurred in Normanton Ward. The case was treated in the Derby Royal Infirmary, and eventually recovered.

TABLE X.—An analysis of the Enteric Fever cases notified in 1910.  
*Cases in which no suggestion as to how infection was received.*

Pro- gress- ive No.	Age	Sex	Sanitary Conveniences.				Nuisances.				Remarks.			
			W.C.	Pail.	Privy.	Privy Cesspool.								
70	27	M.	..	..	..	1	..	..	..	..	..	..	..	..
146	40	F.	1	..	..	..	..	..	..	..	..	..	..	..
192	21	F.	..	..	1	..	..	..	..	..	..	..	..	..
205	23	M.	1	..	..	..	Water supply cut off from w.c.				..	..	..	..
234	21	F.	1	..	..	..	..	..	..	..	..	..	..	..
271	40	F.	1	..	..	..	..	..	..	..	..	..	..	..
318	8	F.	1	..	..	..	..	..	..	..	..	..	..	..
853	35	F.	1	..	..	..	..	..	..	..	..	..	..	..
1067	48	M.	1	..	..	..	..	..	..	..	..	..	..	..
1112	16	F.	1	..	..	..	..	..	..	..	..	..	..	..

*Cases associated with a previous case.*

6	51	F.	1	..	..	..	Smells in cellar, complaints of.				Son said to have had influenza.			
236	9	F.	..	1	..	..	..	..	..	..	Brother had a diarrhœal illness and stomach pains prior to sister's illness.			
671	12	F.	1	..	..	..	..	..	..	..	History of diarrhœal illness in same court.			
674	8	F.	1	..	..	..	..	..	..	..	Resides in same court as case 671.			
681	14	F.	1	..	..	..	..	..	..	..	Sister of case 674.			
700	40	F.	1	..	..	..	..	..	..	..	Mother of cases 674 and 681.			
718	9	M.	1	..	..	..	..	..	..	..	Son of case 700, and brother of cases 674 and 681.			

Also probably the following cases.

442	75	F.	..	1	..	..	Sewage backs up into cellar after heavy rains.	..	..	..	..
468	30	F.	..	..	..	..	..	..	..	..	Union Workhouse Nurse.
766	43	M.	1	..	..	..	..	..	..	..	Been visiting at Church Gresley.
1094	67	F.	1	..	..	..	..	..	..	..	Case notified in December in the the year, had typhoid fever in November, previous year.

Cases possibly associated with some Article of Diet.

170	46	M.	1	..	..	..	..	..	..	..	Ate shellfish, illness followed eating oysters.
270	22	F.	1	..	..	..	..	..	..	..	
286	18	M.	1	..	..	..	Craeked w.c. pan.				Illness followed a few days eating of mussels.
780	28	M.	1	..	..	..	Foul soft water in eistern.				Partook of oysters at Nottingham, illness followed.
877	35	M.	1	..	..	..	..	..	..	..	Ate mussels, raw and cooked.
884	11	F.	1	..	..	..	..	..	..	..	Ate mussels, raw and cooked.
1034	39	F.	1	..	..	..	..	..	..	..	Partook of mussels prior to illness commencing.

PUERPERAL FEVER.

Cases Notified	...	...	...	8
Deaths	...	...	...	4

There were four deaths registered as due to this disease, compared with seven deaths in nine cases in 1909, and seven deaths in 15 cases in 1908, one death in seven cases in 1907, three deaths among 11 notified cases in 1906, and four deaths among 13 cases in 1905. The cases notified were three from Castle Ward, and one each from Bridge, Friar Gate, Normanton, Osmaston, and Rowditch Wards. Of these cases six were removed to the Derby Infirmary, two of which terminated fatally; the other two fatal cases were treated at home. The midwife in attendance on each case of Puerperal Fever was interviewed by the Medical Officer of Health, who advised on precautionary measures. These include disinfection of the clothing of the midwife in attendance on the case, and also disinfection of the midwife's residence. In cases of Puerperal Fever, a note of enquiry is usually forwarded to the

medical man in charge, asking for particulars relating to the case, and in accordance with the reply received the midwife was instructed to refrain from attending other cases for varying periods.

**Midwives Act, 1902.**—In accordance with the requirements of the Midwives Act, 73 women, who were registered as midwives, gave notice of their intention to practise within the boundaries of the Borough. Thirty of these were women who were admitted to the roll on account of their having been in *bona-fide* practice for 12 months prior to July 31st, 1902. Twenty-eight of them were connected with the Royal Nursing Institution, nine were certified trained women working on their own account, two working as maternity nurses only, and four were certified trained women not practising.

One hundred and fifty-nine notices were received from midwives stating that they had had to send for medical assistance, as compared with 157 in 1909.

One hundred and three notifications of still-births were received, and most of them visited by women inspectors.

Fifteen letters were forwarded to the Central Midwives' Board, six of which intimating change of midwife's address, eight related to the practice of two women, and one report of midwife's death.

Five letters were written to midwives on account of failure to notify births, 11 letters *re* unsatisfactory condition of bag, etc.

Letters were sent to nine uncertified women informing them of the provisions of the Midwives Act, 1902, Sec. 1, s.-s. 2, requiring them to discontinue practising as midwives for gain after April 1st, 1910 (except under the direction of a qualified medical practitioner).

All the midwives in the Borough have been regularly inspected by Miss Davies. The record books and outfits were examined, and such failures to comply with the rules of the Midwives' Board as were discovered were reported to the Medical Officer of Health. In the case of minor defects, a letter was forwarded to the midwife concerned, specifically stating the rules which had not been observed and requesting future compliance. In cases of failure at the next

visit, or in the case of more gross negligence, the midwife was requested to attend at the Health Office for personal interview. Nine midwives in all were thus interviewed, as compared with eight in 1909. Five of these were subsequently interviewed and censured or cautioned by the local Supervising Authority.

### MEASLES.

School Notifications	...	...	502
Deaths	...	...	14

The number of Measles cases notified by school teachers is rather higher than in 1909 (436), but the number of deaths is much smaller than the number in 1909, when 45 deaths were recorded from this disease. The number of deaths from Measles in 1910 was 14, but in addition to these the death of a boy, aged two, was certified as due to "Pneumonia, Measles," and is included in the Pneumonia returns.

Of the 14 fatal cases (8 were males and 6 females), the *ages* were as follows:—

Under one year	...	...	...	1
Over one year and under two years	...	...	6	
Over two years and under three years	...	5		
Over three years and under five years	...	2		

**Ward Distribution** of the fatal cases.—There were three deaths from Measles in each of the wards—Dale, King's Mead, and Pear Tree, two deaths in Derwent Ward, and one each in Arboretum, Castle, and Normanton Wards. The death from Pneumonia and Measles occurred in Dale Ward.

**Season.**—The seasonal incidence was as follows:—

1st quarter	...	...	0 deaths.
2nd „	...	...	3 „
3rd „	...	...	8 „
4th „	...	...	3 „

The numbers are too small for comparative purposes, otherwise the fact that the majority of the deaths occurred in the third quarter might be considered remarkable, or a testimony to the effects of the cold and wet summer of 1910.

**Housing.**—The sizes of the various houses occupied by the parents of the 14 cases were:—

Eight-roomed	...	...	...	1
Six-roomed	...	...	...	9
Four-roomed	...	...	...	4

The rentals of the six-roomed houses (which may be considered the most common type of cottage house in Derby) varied from 5s. to 6s. 9d. per week. The rentals of the four-roomed houses averaged 2s. 6d. per week.

**Occupants of Each House.**—The number of the occupant of the houses were respectively as follows:—

Eight-roomed house	...	5.
Six-roomed houses	...	7, 3, 9, 5, 5, 3, 8, 8, 5.
Four-roomed houses	...	5, 4, 5, 8.

In each of the two instances where the occupants numbered three, the patient was an only child.

### **Source of Infection.**

(1) From children living in adjoining houses. In six instances the infection was traced to cases of Measles living near; in two instances Measles existed next door; in one, two doors away; and in three cases Measles was present in houses in the same court.

(2) School infection. Although none of the children who died from Measles were of school age, yet in five instances a brother or sister attending school was first affected. The latter recovered after fatally infecting the younger brother or sister.

(3) Source of infection doubtful. In three instances no definite evidence of the source of infection was obtained outside the household, but in two cases elder brothers or sisters were first attacked.

### **WHOOPIING COUGH.**

School Notifications	...	...	82
Deaths	...	...	14

Fourteen deaths from Whooping Cough were registered in 1910, as compared with 23, 29, and 43 respectively in the three previous years. As last year, all the deaths were of children under five

years of age, the oldest being  $3\frac{1}{2}$  years and the youngest only four weeks old. Two of the 14 cases were complicated with other infectious conditions, one with Phthisis, and the other with Measles (and Broncho-pneumonia).

The number of cases notified by the school teachers is, of course, only a proportion of the total. All the cases occurring in school children are not notified, some teachers being much more zealous in this matter than others. Fortunately, the zealous teachers are greatly in the majority. Taking the average case-mortality of Whooping Cough as 4·7, the 14 deaths would represent approximately 300 cases of the disease.

**Sex.**—Seven of the fatal cases were males and seven females.

**Season.**—Quarterly incidence :—

1st quarter	...	...	6 deaths.
2nd „	...	...	2 „
3rd „	...	...	3 „
4th „	...	...	3 „

**Ward Distribution.**—Markeaton and Bridge Wards had three deaths each from Whooping Cough; Abbey and Pear Tree two each; Arboretum, Bridge, Dale, and Osmaston one each.

**Housing.**—Particulars were obtained of the homes of 12 of the fatal cases. In eight instances the houses had six rooms, one of them with a shop. The rentals varied from 4s. 6d. to 7s. per week (except in the case of the shop). Two of the houses had five rooms, the rentals respectively being 4s. to 5s. per week. One house had four rooms, and one only three rooms. The rental of the latter was 2s. 6d. per week; the house was overcrowded, the father being out of work.

**Cleanliness.**—Personal and domestic cleanliness was reported as “very good” in one instance, “clean” in nine cases, and “fairly clean” in two cases.

#### **Source of Infection.**

(a) From children in adjacent houses	...	...	3
(b) From brothers or sisters attending school	...	...	6
(c) Doubtful	...	...	5

The main factors in the spread of the infection of Whooping Cough were apparently (1) infection at school and (2) visits to adjacent house. Gross carelessness is often observed by parents in taking young children into houses in which Whooping Cough exists.

DIARRHŒA.

Mortality from Diarrhœa during the past eight years.

Year.	Ten Years' Average.	1903	1904	1905	1906	1907	1908	1909	1910
Rate per 1,000.	0·53	0·38	0·68	0·61	0·63	0·34	0·45	0·38	0·21

The deaths from Diarrhœa, which includes the various epidemic disorders of the intestinal tract in infants, numbered 28, as compared with 50, 57, 42 and 78 respectively in the four preceding years. The mortality rate (per 1,000 of the population) is 0·21, which is rather lower than the rate for 1908, and is lower than the rate (0·38 per 1,000) of the seventy-seven great towns. Twenty-four of these deaths were of children under the age of one year, and two under 5 years, the remaining two cases being over 25 years of age.

This disease is most fatal to infants. In addition to the Diarrhœa deaths, there were 13 deaths registered due to Enteritis. The preventive measures have been fully discussed in previous reports, and these have been continued during the year under review.

**Sex.**—Sixteen of the fatal cases were males and 12 females.

**Ward Distribution.**—Friar Gate Ward alone had no deaths from Diarrhœa in 1910. The highest number of deaths (4) occurred in Normanton Ward. Abbey, Castle, and Becket Wards had three deaths each. Arboretum, Dale, Markeaton, and Osmaston Wards, two each, and one death took place in each of the following wards: Babington, Bridge, Derwent, King's Mead, Litchurch, Pear Tree, and Rowditch.

**Season.**—The monthly incidence of Diarrhœa shews that September and October had the highest numbers (6 and 5 respectively), while November and December had 4 each. No deaths from Diarrhœa were recorded in January, February, May, or August. The summer of 1910 was exceptionally cold and wet, otherwise the total number of deaths would probably have been greater, and the proportionate number occurring in August and September increased.

## TUBERCULOUS DISEASES.

Deaths from Phthisis	...	...	...	116
Deaths from other Tuberculous Diseases	...			50
Cases of Phthisis Notified	...	...	...	131

These diseases are classified under two headings, namely:— (1) Phthisis, or Tuberculosis of the Lungs, and (2) “ Other Tuberculous Diseases,” which include tabes mesenterica, tuberculous meningitis, scrofula, etc. The total number of deaths from Tuberculous Diseases is therefore 166. In the report for 1906, the importance of Phthisis in the annual statistical survey was fully discussed, as well as the measures which have been adopted in this Borough for its prevention.

The deaths from Phthisis numbered 116, as against 129 in 1909, 115 in 1908, 121 in 1907, and 113 in 1906; compared as death-rates, these figures represent respectively 0·88, 0·99, 0·90, 0·96, and 0·89 per 1,000 of the population—a slight decrease for 1910.

A reference to Table I. will show that the Phthisis mortality of the last ten years has been slightly under 1, whilst in the preceding ten years the rate was slightly under 1·4, this reduction represents a decline of over 25%, which must be regarded as highly satisfactory.

The ages at death of these Phthisis cases is practically the same as has been noted in the past. Three cases under 5 years of age were registered, 3 between 5 and 15, 18 between 15 and 25, whilst between 25 and 65 there were 87 deaths; there were only 5 deaths at ages over 65.

As regards “ Other Tuberculous Diseases,” the heaviest mortality is observed among children under the age of 5 years, who contributed 33 out of the 60 deaths (14 of the 33 were under 1 year of age), whilst at all ages over 5 there were 17 deaths. A subdivision of the deaths under 1 shows that of the 14 deaths the localisation of the infection was in the brain and lining membrane in 3 instances, and in the abdomen in 2, the remaining 11 showed a distribution over the rest of the organs of the body.

**Notification.**—The number of cases of Phthisis notified was 131, while the number of deaths was 15 less than this. It is probable then that not more than one-third (at a moderate estimate) of the cases existing in the Borough are notified under our present voluntary system. It will be obvious, therefore, that more information as to the existence of these cases is necessary, and earlier notification also if we are to carry out successfully our campaign against Consumption and its allies.

The number of cases of Phthisis notified by the Poor Law Medical Officers under the new Tuberculosis Order (referred to in the Annual Report for 1908), was 38. 44 notifications of changes of address were received from the Master of the Workhouse and from the Relieving Officers. There were 130 notified cases of Phthisis under observation at the end of the year. Of the 116 fatal cases of Phthisis 50 had been notified either voluntarily or under the Tuberculosis Order (*i.e.*, 43%). The remaining 66 fatal cases had not been previously notified.

The following list shews the time between notification and death of these 50 cases:—

*No. of Cases.*

1 case notified 5 days after death.		
1	„	2 „ „ „
1	„	1 day „ „
1	„	same day as death.
4 cases	„	1 day before death.
1 case	„	4 days „ „
1	„	5 „ „ „
1	„	7 „ „ „
1	„	10 „ „ „
1	„	12 „ „ „
1	„	13 „ „ „
1	„	15 „ „ „
1	„	16 „ „ „
1	„	18 „ „ „
1	„	21 „ „ „
1	„	24 „ „ „
1	„	26 „ „ „

*No. of Cases.*1 case notified **27** days before death.

1	„	„	28	„	„	„
2	„	„	30	„	„	„
2	„	„	31	„	„	„
1	„	„	42	„	„	„
1	„	„	49	„	„	„
1	„	„	55	„	„	„
2	„	„	56	„	„	„
1	„	„	59	„	„	„
1	„	„	68	„	„	„
1	„	„	82	„	„	„
1	„	„	91	„	„	„
1	„	„	94	„	„	„
1	„	„	250	„	„	„
1	„	„	268	„	„	„
1	„	„	317	„	„	„
1	„	„	321	„	„	„
1	„	„	350	„	„	„
1	„	„	355	„	„	„
1	„	„	407	„	„	„
1	„	„	422	„	„	„
1	„	„	518	„	„	„
1	„	„	580	„	„	„
1	„	„	626	„	„	„
1	„	„	897	„	„	„
1	„	„	1548	„	„	„
1	„	„	1560	„	„	„

—  
50

From this table it will be seen that 25, or 50%, of the 50 fatal cases notified died within one month of notification.

## Phthisis Notifications.

Year.	Private Practitioners.	Institutions.	Poor Law Cases.	Others.	Total.
July 1st to Dec. 31st, 1902	35	16	5	..	56
1903	35	62	8	..	105
1904	37	56	10	..	103
1905	32	41	9	..	82
1906	43	62	6	..	111
1907	46	33	19	1	99
1908	49	22	37	..	108
1909	50	27	50	..	127
1910	62	29	38	2	131
				(Reported by C.O.S.)	

The total notifications are the largest as yet received in a year. The number reported by private practitioners is higher than in any previous year. The ward distribution of the cases was as follows :—

	Cases					Cases			
	Notified.		Deaths.			Notified.		Deaths	
Abbey	..	11	..	8	King's Mead	..	27	..	6
Arboretum	..	9	..	9	Litchurch	..	7	..	8
Babington	..	4	..	7	Markeaton	..	12	..	10
Becket	..	5	..	7	Normanton	..	2	..	3
Bridge	..	5	..	6	Osmaston	..	4	..	8
Castle	..	9	..	9	Pear Tree	..	5	..	6
Dale	..	5	..	4	Rowditch	..	8	..	8
Derwent	..	9	..	8			—		—
Friargate	..	9	..	9	Totals	..	131		116

The largest number of cases was thus reported from King's Mead Ward, viz., 27. The deaths were highest in Markeaton, Friar

Gate, Castle, and Arboretum Wards. There is a constant variation in the actual totals as observed from year to year, and practically the only constant feature—as has been previously observed—is the unenviable position which King's Mead Ward occupies.

The age incidence of persons attacked and notified in 1910 is shown in the subjoined table, the deaths registered at the same age period are inserted for comparison.

	All ages.	0-15	15-25	25-45	45-65	65 upwards.
Males ...	80	10	14	34	17	5
Females ...	51	10	6	23	11	1
Total ...	131	20	20	57	28	6
Deaths ...	116	6	18	87		5

The notification shews an increase of 4 compared with 1909. The number of males increased from 67 to 80, whilst the notification of females was reduced from 60 to 51.

The number of specimens of sputum sent for bacteriological examination was 34, of which 4 showed the presence of the tubercle bacilli.

Enquiries have been made into the *occupations* followed by the patients, and the information thus obtained has been tabulated in the subjoined table. The totals vary from year to year, and they show no striking incidence on any particular trade. The textile workers contributed 12 cases as against 5 last year, labourers 32 as against 12, and the various workers in wood, stone, and metal 15 as against 16 in the previous tabulation. Children and persons engaged in domestic work contributed 16 and 30 respectively, as compared with 13 and 34 in the previous report.

<i>Textile Workers.</i>				<i>Workers in Wood, Stone, and Metal.</i>			
Wire Coverers	..	..	2				
Lace Hands	..	..	3	Iron Moulder	..	..	1
Mill Hands	..	..	5	Iron Turner	..	..	1
Tape Worker	..	..	1	Fitters	..	..	3
Silk Winder	..	..	1	Pattern Maker	..	..	1
Total	..	..	12	Joiner and Wood Sawyer	..	..	1
			—	Foundry Labourer	..	..	1
<i>Labourers.</i>				Various	..	..	7
General	..	..	14	Total	..	..	15
Railway Works Labourers	..	..	12				—
Others	..	..	6				
Total	..	..	32				
			—	<i>Domestic Duties.</i>			
<i>Indoor Occupations.</i>				Housewives and			
Printer	..	..	1	Domestic Servants	}	..	30
Draughtsman	..	..	1				—
Clerks	..	..	3				
Various	..	..	7				
Total	..	..	12				
			—				
				<i>Children.</i>			
				School	..	..	12
				Others	..	..	4
							—
							16
			—				—
<i>Various Occupations.</i>							
Firemen (Railway)	..	..	2	Groom	..	..	1
Leather Worker	..	..	1				—
Draymen	..	..	2	Total	..	..	12
Cellarman	..	..	1	No record	..	..	2
Window Cleaners	..	..	2				—
Traveller	..	..	1				14
Checker	..	..	1				—
Coach Painter	..	..	1	Grand Total			131
							—

**Causation.**—The same plan has been adopted as in previous years of grouping cases of Phthisis into six classes, or “series,” in accordance with the most obvious factors as to causation brought out on investigation of the respective cases.

It is quite probable that many of the cases included in series 2 are instances of direct infection, and might be included in series 1. The cases included in series 1 are those in which direct infection in previously healthy persons seemed to be the pronounced factor. In the other groups or series the source of infection was not so evident; the cases have been classified, therefore under the heading of the most prominent predisposing factor.

**Series 1.—Probably direct infection.**

- Case 32.—Sister died of Phthisis.
- Case 35.—Brother died of Phthisis 1910.
- Case 112.—Brother under treatment for Phthisis.
- Case 115.—Brother and Sister suffering from Phthisis.
- Case 125.—Sister to Case 127.
- Case 131.—Nursed Brother through Phthisis illness.
- Case 147.—Brother suffering from Phthisis.
- Case 168.—Father at home suffering from Phthisis.
- Case 177.—Husband died of Phthisis.

**Series 2.—Family History.**

- Case 1.—Brother died of Lung Trouble.
- Case 14.—Sister and maternal Uncle died of Phthisis.
- Case 19.—Mother and Brother died of Phthisis.
- Case 21.—Son died of Phthisis.
- Case 24.—Brother died of Phthisis.
- Case 34.—Mother died of Phthisis.
- Case 37.—Sister died of Phthisis.
- Case 39.—Father died of Phthisis.
- Case 42.—Mother, Brother, and two Sisters died of Phthisis.
- Case 44.—Father and Mother died of Phthisis.
- Case 53.—Father died of Phthisis.
- Case 55.—Maternal Aunts died of Phthisis.
- Case 64.—Maternal Aunt died of Phthisis.
- Case 83.—Father died of Phthisis.
- Case 84.—Father died of Phthisis.
- Case 88.—Husband died of Phthisis.
- Case 90.—Two brothers died of Phthisis.
- Case 93.—Husband and Sister died of Phthisis, 1908.
- Case 100.—Mother died of Phthisis.
- Case 102.—Father died of Phthisis.
- Case 107.—Father died of Phthisis.

**Series 2—Family History—continued.**

- Case 111.—Mother died of Phthisis.
- Case 119.—Brother and Sister died of Phthisis.
- Case 130.—Brother, Sister, and Daughter died of Phthisis.
- Case 156.—Mother and Sister died of Phthisis.
- Case 162.—Mother and Aunt died of Phthisis
- Case 169.—Husband died of Phthisis.

**Series 3.—Occupation.**

- Case 53.—Compositor.
- Case 106.—Soldier. Had hard life in South Africa during Boer War.
- Case 28.—Soldier had hard life in South Africa during Boer War.
- Case 31.—Soldier had hard life in South Africa during Boer War.

**Series 4.—Following Illness.**

- Case 3.—Following attack of Pleurisy.
- Case 6.—Lung trouble followed by Scarlet Fever illness.
- Case 16.—Following Pneumonia.
- Case 15.—Succession of Colds. Gets wet through frequently.
- Case 17.—Patient suffered from Bronchitis.
- Case 18.—Following operation.
- Case 20.—Delicate physique, anæmia and general weakness.
- Case 22.—Following operation.
- Case 23.—Patient had several attacks of Pleurisy.
- Case 33.—Patient had Typhoid Fever and Influenza.
- Case 36.—Following Pneumonia.
- Case 41.—Following Influenza.
- Case 52.—Following attack of Influenza.
- Case 73.—Patient suffered from Anæmia.
- Case 80.—Delicate Child. Abscesses on neck. Operation.
- Case 86.—Phthisis illness followed by attack of Bronchitis.
- Case 89.—Severe colds in Autumn of 1909. Hæmorrhage from Lungs—Christmas, 1909.
- Case 92.—Delicate physique.
- Case 94.—Neglected “Colds.”
- Case 95.—Delicate physique.
- Case 96.—Frequent attacks of Bronchitis.
- Case 97.—Patient had Bronchial illness.
- Case 99.—Following Inflammation of Lungs and Pleurisy.
- Case 103.—Had wound in left hip for 2 years.
- Case 110.—Patient had Pleurisy.
- Case 124.—Successive “Colds”
- Case 126.—Successive colds prior to, and since confinement.
- Case 183.—Neglected “Colds.”
- Case 136.—Patient had frequent attacks of Bronchitis.
- Case 146.—Neglected “Colds”
- Case 148.—Patient had severe attack of Hæmorrhage.
- Case 149.—Patient had Measles and Pneumonia.

Series 4—**Following Illness**—*continued*.

- Case 150.—Lung trouble followed Measles illness.  
 Case 151.—Attack of Pleurisy.  
 Case 157.—Anæmic and general weakness.  
 Case 165.—Patient suffering from Anæmia. Neglected “Colds.”  
 Case 166.—Patient suffered from Influenza.  
 Case 170.—Following Diphtheria.

Series 5.—**Personal Habits.**

- Case 26.—Hard life. Apparently insufficiently fed.  
 Case 29 —Alcoholic History.  
 Case 50.—Patient led hard and exposed life.  
 Case 51.—Alcoholic History.  
 Case 61.—Alcoholic case.  
 Case 72.—Heavy Drinker.  
 Case 87.—History of alcoholism.  
 Case 108.—Takes freely of alcohol.  
 Case 127.—(Athlete). Heavily trained when in poor circumstances for long distance races.  
 Case 139.—Alcoholic history.  
 Case 171.—Hard life whilst husband out of work.

Series 6.—**No record as to causation.**

Cases 2, 5, 7, 10, 11, 25, 40, 46, 49, 59, 66, 71, 77, 98, 105, 109, 113, 114, 116, 118, 120, 122, 129, 134, 135, 140, 141, 143, 152, 153, 154, 155, 158, 159, 160, 161, 164, 167, 172, 173, 176.

**Housing.**—The conditions of 113 houses occupied by notified cases of Phthisis were investigated by Nurse Walls during the year. The results of the enquiries were as follows:—

Houses.				Cases.		Rentals (average).
2-roomed	...	...	7	...	2/-	
3	„	...	7	...	3/-	
4	„	...	18	...	4/-	
5	„	...	8	...	4/6	
6	„	...	61	...	5/-	
Over 6 rooms	...	6	...	5/6		
Common lodging houses	6	...	—			

Four of the houses were “back to back” and five others had no through ventilation.

**Instances of more than one case in the same house.**

Case No. 14—Mother, 47 years.

„ 151—Daughter, 11 years.

**Average number of persons per room.**

2-roomed houses	...	1·2 persons per room.
3 „	...	1·7 „ „
4 „	...	1·1 „ „
5 „	...	1·0 „ „
6 „	...	0·9 „ „

Cases with separate bedroom, 47.

Cases with no separate bedroom, 60 (6 had separate beds).

**Administrative Procedures.**—These have been detailed in previous reports, and it is not necessary to again record them. One additional step has been taken in 1910, and that is the destruction of all pails used in the closets of houses in which fatal cases of Phthisis have occurred, and the provision of new pails where conversion to the water-carriage system is not immediately practicable.

The Health Department has received valuable help from the Local Charity Organisation Society in dealing with Phthisis cases, and in some cases the Local Guild of Help has given valuable assistance either to phthisical patients or their families.

**Institutional Treatment.**—The Council of the Corporation adopted the following resolution at the March meeting, 1910:—

“ That the sum of £870 be granted for the provision of a Sanatorium at the Infectious Diseases Hospital for the treatment of cases of Tuberculosis.”

The amount suggested was to cover the cost (*a*) of certain alterations to the existing wooden pavilion on the site of the Infectious Diseases Hospital necessary to adapt it for the reception of cases of Phthisis, and (*b*) for the erection of a small Administrative Pavilion. The wooden pavilion referred to stands in a field adjoining the site upon which the present Infectious Diseases Hospital has been erected, and the new Administrative House (or Pavilion) was erected on the side of the field furthest away from this site.

Steps were taken to carry out the resolution of the Council. The scheme had not been quite completed at the end of 1910, but it was hoped that it would be possible to take in cases early in 1911.

**Cases Treated at the Derby Royal Infirmary.**—A certain number of cases are treated on open-air principles (on the balconies, etc.) at the Royal Infirmary, the number treated during the year ending September 28th, 1910, was 70, as compared with 52 treated in the preceding 12 months. The results were as follows:—

Cured	...	...	...	...	1
Relieved	...	...	...	...	52
(One discharged at own request)					
Unrelieved	...	...	...	...	0
Died	...	...	...	...	5
In Hospital	...	...	...	...	12
—					
Total				...	70
—					

### HOSPITAL FOR INFECTIOUS DISEASES.

The staff consisted of a Resident Medical Officer, a Matron, two Sisters in Charge, two Assistant Nurses, and nine Probationers; in addition there were Cook, Kitchenmaid, two Housemaids, Between Maid, Laundress and Laundrymaid, four Wardmaids, and Caretaker and his Wife. Additonal help was given by two men who attended daily for work in the boiler-house and grounds. The Matron (Miss Mould) has by her tact and ability well maintained the good discipline and efficiency of the Nursing and Domestic Staffs during the year.

The admission of Diphtheria cases, commenced in 1907, was continued throughout the year, and 201 cases were admitted as compared with 376 cases in 1909 and 218 in 1908. The number of cases of Scarlet Fever admitted, however, was greatly in excess of of that of the preceding year, the accommodation in Hospital being insufficient for the number of cases requiring admission. In one instance, two cases of Scarlet Fever had to be treated at home, and the mother prevented from following her occupation—that of taking in washing; compensation was paid to her by the Health Department.

The Bacteriological Laboratory was utilized fairly extensively, the number of examinations being as follows:—Throat Swabs 2,705

and Sputum Examinations 39 ; compared with 5,310 Throat Swabs and 33 Sputum Examinations in 1909. Details of these examinations are given on pages 65-71.

As a preliminary to the discharge of Diphtheria patients from Hospital, swabbings of the throat were taken in each case, showing the absence of the Klebs-Löffler bacilli; two successive negative swabs taken from both throat and nose were required before discharge of the patient was sanctioned.

No case of Smallpox has been admitted during the past year. Fortunately the town has been free from the disease. The need for some special provision for the isolation of Smallpox is again emphasized.

The following statistics have reference to the patients under treatment during the past year:—

Remaining in Hospital, December 31st, 1909 ...	26	...	34
Admitted during 1910 ... ..	421	...	201*
Number discharged during 1910 ... ..	387	...	210*
Number who have died in Hospital during 1910	3	...	12
Remaining under treatment on Dec. 31st, 1910	57	...	13*

\*These figures include "contact" or "carrier" cases.

### SCARLET FEVER.

Number of Cases	...	...	421.
Number of Deaths	...	...	3.
Case Mortality	...	...	0.71%.

An analysis of the cases of Scarlet Fever shows that—

At ages of 0-5 there were 74 cases admitted.

„	5-10	„	171	„
„	10-15	„	109	„
„	15 and over		67	„

*Type of Case—*

416 were of the ordinary type.

5 „ „ septic type.

There were no severe toxic cases.

Two of the above cases were admitted as suffering from Diphtheria, while 16 cases admitted as Scarlet Fever were found not

to be suffering from that disease. Sixteen of the cases on admission were found to be suffering from some other disease or injury. The three fatal cases were respectively aged 1, 4 and 5 years; in two cases death was due to burns in addition to Scarlet Fever. The case mortality is the lowest recorded in the Hospital.

*Complications—*

29	cases	suffered from	Discharging Ears.
17		,,	Discharging Noses.
14		,,	Albuminuria and Nephritis.
91		,,	Enlarged Glands.
20		,,	Rheumatism.
5		,,	Tonsillitis.
5		,,	Heart Affection.
2		,,	Pneumonia.
4		,,	Phthisis.

11 cases developed Secondary Scarlet Fever while convalescing from the primary attack.

In the majority of cases the complication was not of a serious nature.

*Duration of Stay—*

The duration of stay in Hospital of the patients discharged in 1910 averaged 39·1 days. The average number of Scarlet Fever patients in Hospital per day in 1910 was 45·1.

## DIPHTHERIA.

NUMBER OF CASES	...	201.
Case Mortality	... ..	6·7%.

This number includes 23 “contact” or “carrier” cases, *i.e.*, cases shewing the presence of Diphtheria bacilli in the throat but no clinical symptoms of the disease. There were therefore 178 cases of true Diphtheria among the 201 cases admitted.

*(A) “Contact” or “Carrier” Cases (23)—*

Age periods.			
0- 5	...	5 cases.	It will thus be seen that this precautionary detention in Hospital applied mainly to children, in only two cases were wage-earners detained in Hospital.
5-15	...	10 ,,	
10-15	...	6 ,,	
15-20	...	1 case.	
over 20	...	1 ,,	

*Duration of Stay—*

The average duration of stay in Hospital for these cases was 21·4 days, and the average number in Hospital per day was approximately 1·3.

*Antitoxin.*

Every “carrier” or “contact” case admitted was given a prophylactic dose of 2,000 units of Antitoxin.

Age.	Cases.	Deaths.	Case Mortality.
0-5 ...	32 ...	2 ...	6·2%
5-10 ...	70 ...	10 ...	14·3%
10-15 ...	32 ...	0 ...	0%
15 and over ...	44 ...	0 ...	0%
	<hr/> 178 <hr/>	<hr/> 12 <hr/>	

*(B) Clinical Cases (178).*

*Type of the Disease.*—Six of the cases were of the laryngeal type, in the remainder (172) the disease primarily affected the fauces. It will be noticed that the disease was most prevalent and most fatal in children between 5 and 10 years of age.

*Approximate time of admission of Diphtheria cases—*

On 1st day of illness	... 4 cases.
„ 2nd	„ ... 32 „
„ 3rd	„ ... 44 „
„ 4th	„ ... 30 „
„ 5th	„ ... 17 „
Between 6th and 10th day	36 „
After 10th day of illness	... 9 „
Day of illness not known	... 6 „

*Antitoxin.*

In 38 cases Antitoxin had been administered before admission. In Hospital an average of 6,800 units was administered to the 178 patients.

*Causes of Death—*

Toxæmia	... .. 2
Heart Failure	... .. 10

*Paralysis.*

Soft Palate	... .. 2 cases.
Eye	... .. 1 case.

All the cases in which Paralysis occurred were between the ages of 5 and 10 years.

*Laryngeal Obstruction—*

Cases	...	...	...	...	6
Tracheotomy	...	...	...	...	3
Deaths	...	...	...	...	3

In one case Tracheotomy was performed at the Children's Hospital and the child removed to the Infectious Diseases Hospital later. Tracheotomy was performed in two cases admitted directly to the Diphtheria wards, one of these recovered and the other died from Heart Failure. One of the Laryngeal cases in which Tracheotomy was not performed was also fatal.

All the Laryngeal cases were between the ages of 5 and 10 years, with one exception—a child aged 4 years.

*Duration of Stay (178 Diphtheria cases)—*

Average stay in Hospital, 22·2 days.

Average number of cases in Hospital per day, 10·8.

Average number of Diphtheria and "carrier" cases in Hospital per day, 12·1.

*Other Complications—*

Enlarged Glands	...	...	...	3 cases.
Antitoxin Rashes	...	...	...	14 ,,
Nasal Discharge	...	...	...	5 ,,
Albuminuria (severe)	...	...	...	2 ,,
Chicken-pox	...	...	...	1 ,,
Otorrhœa	...	...	...	3 ,,
Follicular Tonsillitis	...	...	...	2 ,,
Scarlet Fever	...	...	...	2 ,,
Ringworm	...	...	...	2 ,,
Measles, Epilepsy, and Phthisis, one each.				

Seven cases sent in as Diphtheria proved to be Follicular Tonsillitis, while in 12 cases there was, on admission, no apparent illness and bacteriology proved the absence of Diphtheria bacilli.

**The Laboratory.**

The following is a summary of the work done at the Hospital Laboratory during 1910:—

I.—*Throat Swabs.* 2,705 swabs were examined for the presence of Diphtheria bacillus, as compared with 5,310 in 1909. An analysis of these swabs is given in detail in the following table, prepared by Dr. A. Middleton Hewat, Resident Medical Officer.

## ANALYSIS OF

D—Cases for Diagnosis.

C—Cases which have been

School.			January	February	March.	April.	May.	June.
ASHBOURNE ROAD	D	+	..	..	..	..	..	..
		—	1	6	5	2	2	3
	C	+	..	..	..	..	..	..
		—	..	5	..	..	..	..
BRIGHTON ROAD	D	+	..	..	..	..	..	..
		—	3	3	..	..	..	2
	C	+	..	..	..	..	..	..
		—	4	..	..	..	..	..
CLARENCE ROAD	D	+	..	..	..	..	..	..
		—	..	..	..	1	..	1
	C	+	..	..	..	..	..	..
		—	8	..	..	..	..	2
FIRS ESTATE	D	+	..	..	..	..	..	..
		—	..	1	..	1	..	..
	C	+	..	..	..	..	..	..
		—	..	..	..	..	..	2
GERARD STREET	D	+	..	..	..	..	..	..
		—	..	2	..	10	..	..
	C	+	..	..	..	2	..	..
		—	..	6	2	4	2	..
NOTTINGHAM ROAD	D	+	..	..	..	..	..	..
		—	..	9	1	..	..	..
	C	+	..	..	..	..	..	..
		—	..	..	3	..	..	..
NUN STREET	D	+	..	..	1	..	..	..
		—	..	..	1	..	..	..
	C	+	..	..	..	..	..	..
		—	..	..	16	..	..	..
PEAR TREE COUNCIL	D	+	..	..	..	..	..	..
		—	2	2	1	..	..	..
	C	+	..	1	..	..	..	..
		—	..	1	..	..	..	..
ST. JAMES' ROAD COUNCIL	D	+	..	..	..	..	..	..
		—	..	1	3	2	..	3
	C	+	..	..	..	..	..	..
		—	..	3	..	..	..	..
TRAFFIC STREET	D	+	..	..	1	..	..	..
		—	1	..	..	..	..	1
	C	+	..	..	..	..	..	..
		—	4	..	2	3	..	2
ST. ANNE'S	D	+	..	..	..	..	..	..
		—	..	..	1	..	..	..
	C	+	..	..	..	..	..	..
		—	..	..	..	..	..	7
CHRIST CHURCH	D	+	..	..	..	..	..	1
		—	..	..	1	..	..	..
	C	+	..	..	..	..	..	..
		—	..	..	3	..	..	4
CURZON STREET	D	+	..	..	..	..	..	..
		—	..	..	..	..	..	..
	C	+	..	..	..	..	..	..
		—	..	..	..	..	..	..
ST. MARY'S	D	+	..	..	..	..	..	..
		—	..	..	..	..	..	..
	C	+	..	..	..	..	..	..
		—	..	..	..	3	3	..

**SCHOOL SWABS (Diphtheria).**

in contact with a known case of Diphtheria. + Indicates Positive results  
 .. ,, Negative ..

<i>July.</i>	<i>August.</i>	<i>September.</i>	<i>October.</i>	<i>November.</i>	<i>December.</i>	<i>Totals.</i>
..	..	..	..	..	..	..
..	..	1	..	3	..	23
..	..	..	..	..	..	..
..	..	6	..	..	..	11
..	..	..	1	..	..	1
..	..	..	2	1	..	11
..	..	..	..	..	..	0
..	..	..	3	..	2	9
..	..	..	..	..	..	..
..	..	..	..	..	..	2
..	..	..	..	..	..	0
..	..	..	..	..	..	..
..	..	..	..	1	..	3
..	..	..	..	..	..	..
..	..	..	..	..	..	2
..	..	..	..	..	..	..
..	..	..	1	..	..	13
..	..	..	..	..	..	2
..	..	..	2	..	..	16
..	..	..	..	..	..	..
..	..	..	..	..	..	10
..	..	..	..	..	..	..
..	..	..	..	..	..	3
..	..	..	..	..	..	1
..	..	..	..	..	..	1
..	..	..	..	..	..	..
..	..	..	..	..	..	13
..	..	..	..	1	..	1
..	..	..	..	5	..	10
..	..	..	..	2	..	3
..	..	2	..	18	10	31
..	..	..	..	..	..	..
..	..	1	4	..	1	15
..	..	..	..	..	..	..
..	..	3	5	..	..	11
..	..	..	..	..	..	1
..	..	1	..	3	..	6
..	..	..	..	..	..	..
..	..	..	..	..	..	11
..	..	..	..	..	..	..
..	..	..	..	..	..	1
..	..	..	..	..	..	2
..	..	..	..	..	..	..
..	..	..	..	..	..	7
1	..	..	..	..	..	1
..	..	..	..	..	..	2
..	..	..	..	..	..	..
..	..	..	..	..	..	7
..	..	..	1	..	..	1
..	..	3	..	..	..	3
..	..	..	..	..	..	..
2	..	..	2	..	..	4
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	6

<i>School.</i>		<i>January</i>	<i>February</i>	<i>March.</i>	<i>April.</i>	<i>May.</i>	<i>June.</i>
HASTINGS ST.	<b>D</b> { + - <b>C</b> { + - 3	.. .. .. 3	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. ..
PRACTISING ..	<b>D</b> { + - <b>C</b> { + - 8	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. 8	.. .. .. ..	.. .. .. ..
ST. ANDREW'S	<b>D</b> { + - <b>C</b> { + - 2	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. 2	.. .. .. ..	.. .. .. ..
ST. CHAD'S ..	<b>D</b> { + - <b>C</b> { + - 5	.. .. .. ..	.. .. .. 5	.. .. .. ..	.. .. .. 5	.. .. .. ..	.. 2 .. 2
ST. DUNSTAN'S	<b>D</b> { + - <b>C</b> { + - 2	.. .. .. 2	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. ..
ST. JAMES' H.G.	<b>D</b> { + - <b>C</b> { + - 8	.. 8 .. ..	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. 2
ST. JOHN'S ..	<b>D</b> { + - <b>C</b> { + - 1	.. .. .. ..	.. 1 .. ..	.. .. .. ..	.. .. .. 3	.. .. .. ..	.. .. .. ..
ST. JOSEPH'S	<b>D</b> { + - <b>C</b> { + - 1	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. 1 .. ..	.. .. .. ..	.. .. .. ..
ST. LUKE'S ..	<b>D</b> { + - <b>C</b> { + - 1	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. 1 .. ..	.. .. .. ..	.. .. .. ..
ST. PAUL'S ..	<b>D</b> { + - <b>C</b> { + - 2	.. 2 .. ..	.. .. .. ..	.. 1 .. ..	3 4 1 3	.. 3 3 ..	.. .. .. ..
ST. PETER'S	<b>D</b> { + - <b>C</b> { + - 1	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. ..
ST. THOMAS' ..	<b>D</b> { + - <b>C</b> { + - 6	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. 6	.. .. .. ..	.. .. .. ..
TRINITY ..	<b>D</b> { + - <b>C</b> { + - 3	.. .. .. ..	.. 1 .. 3	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. ..
MUNICIPAL SEC.	<b>D</b> { + - <b>C</b> { + - 1	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. 1
OSMASTON COUNCIL	<b>D</b> { + - <b>C</b> { + - 3	.. .. .. ..	.. .. .. 3	.. .. .. ..	.. .. .. ..	.. .. .. ..	.. .. .. ..

<i>July.</i>	<i>August.</i>	<i>September.</i>	<i>October.</i>	<i>November.</i>	<i>December.</i>	<i>Totals.</i>
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	3
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	8
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	2
..	..	..	..	..	..	..
..	..	..	..	..	..	2
..	..	..	..	..	..	..
..	..	..	..	3	..	15
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	2
..	..	..	..	..	..	..
..	..	..	..	..	1	9
..	..	..	1	..	..	1
..	..	..	5	3	3	13
..	..	..	..	..	..	..
..	..	..	..	..	..	1
..	..	..	..	..	..	..
..	..	..	..	..	..	3
..	..	..	1	..	..	1
..	..	..	..	1	..	2
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	1
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	6
..	..	..	..	..	..	..
..	..	..	..	..	3	4
..	..	..	..	..	..	..
..	..	..	..	..	2	5
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	1
..	..	..	..	..	..	..
..	..	..	..	..	..	..
..	..	..	..	..	..	3

ANALYSIS OF SWABS.

1910.	HOSPITAL.				DEPARTMENT.						DOCTORS.				Grand Monthly Total.					
	Diagnosis.		Discharge.		Total	Diagnosis.		Contacts.		Disinfecti'n		Total	Diagnosis.			Contacts.		Disinfecti'n		Total
	+	-	+	-		+	-	+	-	+	-		+	-		+	-	+	-	
January ..	9	22	21	124	176	1	30	2	86	0	6	125	8	24	0	0	0	4	36	337
February ..	15	17	9	73	114	1	37	5	72	3	25	143	10	16	1	1	4	3	35	292
March ..	13	12	8	88	121	7	14	0	96	0	8	125	10	22	1	6	1	5	45	291
April ..	11	3	6	104	124	4	44	5	45	2	8	108	6	21	1	2	0	5	35	267
May ..	7	8	10	80	105	4	7	4	88	1	10	114	7	28	0	6	1	7	49	268
June ..	2	28	6	57	93	2	14	0	54	0	2	72	3	22	0	0	1	2	28	193
July ..	5	21	5	7	38	3	4	1	29	0	3	40	2	31	0	0	0	1	34	112
August ..	4	16	15	57	92	1	1	3	49	0	10	64	8	12	0	0	1	2	23	179
September ..	3	10	9	25	47	4	23	2	57	0	3	89	3	18	0	2	0	0	23	159
October ..	4	6	20	44	74	4	14	5	61	0	5	89	10	11	0	0	3	2	26	189
November ..	10	12	5	36	63	4	21	6	64	1	8	104	7	25	0	3	2	4	41	208
December ..	9	24	8	51	92	4	14	3	32	3	17	73	11	19	1	6	4	4	45	210
Yearly Totals	92	179	122	746	1139	39	223	36	733	10	105	1146	85	249	4	26	17	39	420	2705

II.—*Sputum Examination.* The number of sputum specimens examined in 1910 for the presence of tubercle bacilli was 39, five of these 39 specimens gave positive results, while 34 were negative. The specimens were obtained from the following sources:—

(a) from General Practitioners	...	...	...	37
(b) from School Medical Officer	...	...	...	1
(c) from Isolation Hospital	...	...	...	1

III.—*Examination of Disinfectants.* The carbolic co-efficients of 26 different disinfectants were estimated by the Rideal-Walker method.

IV.—Two samples of Milk were examined for tubercle bacilli. Result, both negative.

V.—One sample of Urine examined for tubercle bacilli. Result, negative.

VI.—*Preparation of Media, etc.* The blood serum and other media were prepared in the Laboratory, the swab outfits were also prepared and sterilised.

### Hospital Provisioning, 1910.

1910.	Days of treatment.	Average Patients per day	Cost of Provisioning.			Average Cost per Patient per day.*	
			£	s.	d.	s.	d.
1st Quarter	5876	65·3	251	4	0½	0	10·26
2nd „	6747	74·1	298	2	5½	0	10·61
3rd „	5650	61·4	277	7	4	0	11·75
4th „	5666	60·94	276	16	5½	0	11·73
Totals 1910	23939	65·6	1103	10	3	0	11·06
Totals for 1909	17,828	49·9	885	2	9½	0	11·92

\*This includes cost of provisioning staff.

## WATER SUPPLY.

Continued supervision was exercised over the water supply from the wells which still exist in some parts of the town, especially in the Alvaston district. Water samples were taken from ten of these wells and carefully examined, evidence of pollution being found in one of them. This well was then closed and town's water substituted.

**Public Water Supply.**—The following is a report on the analyses of four samples of water taken from present sources of supply to the Borough on January 25th, 1911—:

The samples, as usual, are from the two main sources of the supply, namely, the Carr Brook and the Filter Tunnels and from the Filter Beds as delivered for consumption to the town.

The water from the Carr Brook contained a few particles of suspended matter, and that from the Tunnel traces of fungoid growth. All samples showed the faint blue colour of organically pure water. The sample taken from Freeman's Filter Bed was only subjected to bacterioscopic examination.

*Chemical Analysis.*—Parts per 100,000 :—

				Carr Brook.	Filter Tunnel.	Low Service.	High Service.
Chlorine	...	...	...	2.20	1.90	2.10	2.00
Sulphuric Acid (SO <sub>3</sub> )	...	...	...	4.63	6.24	5.49	6.24
Nitric Acid (N <sub>2</sub> O <sub>5</sub> )	...	...	...	1.66	0.53	1.04	0.50
Phosphoric Acid	...	...	...		None.		
Free Ammonia	...	...	...	0.0014	0.0024	None	None
Albuminoid Ammonia	...	...	...	0.0030	0.0046	0.0026	0.0040
Oxygen absorbed from perman- ganate at 80°F. in 15 mins.				0.0160	0.0180	0.0120	0.0120
Do. in 4 hours	...	...	...	0.0272	0.0320	0.0248	0.0248
Total Solids dried at 212°F.				32.24	37.52	35.60	37.20
Loss on Ignition	...	...	...	3.60	3.68	3.44	3.52
Appearance of solids on heating	...	...	...		No visible change.		
Hardness Permanent	...	...	...	11.2	10.3	10.1	10.2
Do. Temporary	...	...	...	12.4	18.5	17.2	18.0
Do. Total	...	...	...	23.6	28.8	27.3	28.2

*Bacterioscopic Examination:—*

	Carr Brook.	Filter Tunnel.	Low Service.	High Service.	Freeman's Filter.
Total number of Organisms per cubic centimetre growing on gelatine ...	101	17	24	15	25
Do. on Agar at blood-heat	3	4	2	1	3
B.Coli detectable—	In 20 cc.	Not in 36 cubic centimetre.			

The results are quite satisfactory, both Carr Brook and Tunnel waters are unusually pure; from the latter the very objectionable organisms which infested it for some time, and which produced notable traces of ammonia, have disappeared. The hardness of the Tunnel water has increased somewhat, mainly owing to a rise in the sulphates. The quality of the raw waters is unexceptionable.

Filtration has been most efficiently carried out, and both the chemical and bacteriological condition of the water as supplied to the Borough is as good as can possibly be required by the most exacting sanitarian.

(Signed) OTTO HEHNER.

**MILK SUPPLY.**

Twelve samples of Milk were sent to Professor Delépine's Laboratory during 1910.

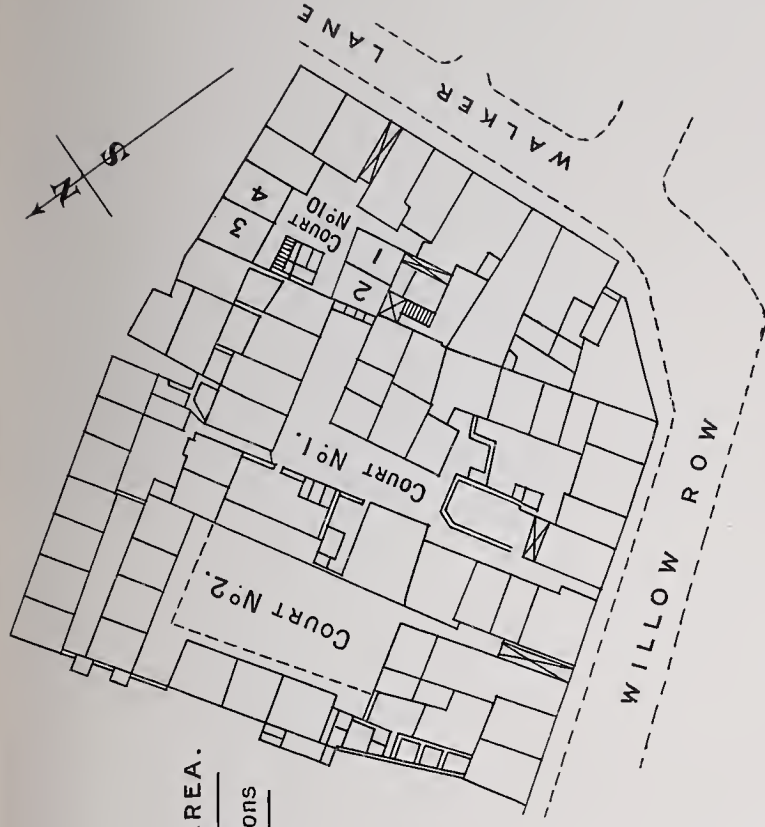
One of these samples showed the presence of tubercle bacilli as shown by inoculation, while 11 were found *not* to cause Tuberculosis.

The positive sample was obtained from a milk cart in a street of the town, and belonged to a farmer living outside the Borough. The farm was accordingly visited by the Medical Officer of Health with Mr. Abell (Veterinary Surgeon) in accordance with the provisions of the Derby Corporation (Tramways) Act, 1899, Part III., Section 31. The cow yielding the tuberculous milk was very readily detected. A very obvious "waster" was found in the stalls, which had a large lump in the udder. It was not thought necessary to take any more samples of milk from this cow, its condition was so obvious, but samples were taken from four other cows whose condition seemed to be suggestive of Tuberculosis, the results of analysis, however, were negative in these cases. The



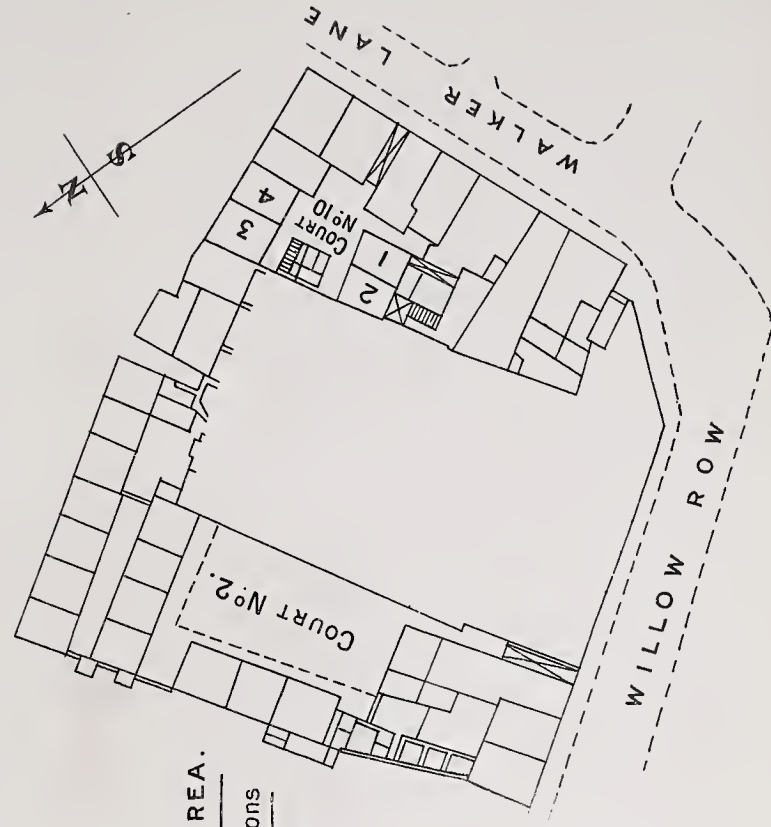
WILLOW ROW AREA.

Before alterations



WILLOW ROW AREA.

After alterations





## PROSECUTIONS DURING 1910.

(1) Two butchers were prosecuted for exposing unsound food for sale. Each fined £10 and costs.

(2) Father prosecuted for failing to notify a birth under the Notification of Births Act. Ordered to pay costs (6/6).

(3) Mother of Scarlet Fever case prosecuted for allowing infected articles to leave the house before disinfection, in spite of the strict injunctions to the contrary of the District Inspector. Fined 10/- (including costs).

(4) Prosecution under the Food and Drugs Acts. (See Inspector Wilkinson's Report).

## MEAT INSPECTION.

Details of the articles of food condemned and destroyed during 1910 will be found in Mr. Wilkinson's report. The relative number of animals intended for food which were inspected and found to be infected with Tuberculosis was as follows:—

Bull, 1; Bullocks, 2; Heifers, 3; Cows, 49; Pigs, 2.

In very few cases was it necessary to condemn the carcass or portions of it for Tuberculosis, except in the case of pigs. No prosecution was undertaken for Tuberculosis during the year, but prosecution of two butchers for exposing for sale some sink beef (from the same carcass) led to convictions, and a fine of £10 and costs in each case, the costs amounting to 15s. in one case and 11s. in the other.

## PTOMAIN POISONING.

A somewhat extensive outbreak of Ptomaine Poisoning occurred in September last at the Training College, and 105 persons were affected. Fortunately no lives were lost, although the outbreak caused a certain amount of alarm at the time. The cause of the outbreak was attributed to some pickled or corned beef, and a specimen was sent to Professor Delépine, of Manchester, for examination. The beef was purchased on Friday, the 9th, and pickled

at the College the next day. A description of the kitchen premises at the College is as follows:—

These consisted of one large kitchen, separated by a passage from the larder. These rooms are situated in the basement of the building, the larder being partially underground, but owing to the slope of the ground the kitchen itself is chiefly above ground. The floors of both kitchen and larder, also the passage, are tiled and kept very clean. The walls of the larder are lined with white glazed bricks.

Inspector Hanson examined the sanitary conditions of the premises, and his report is as follows:—

“ On making an examination of the drains at these premises, I find that all gullies are of modern construction and properly trapped.

“ KITCHEN SINKS.—These are also properly trapped under the sinks, and are disconnected from drain by discharging under gully on the outside of the building.

LARDER.—There is one large window 4' 4" × 4' 6" and this is covered by gauze all over; there is also an area with a light in it, and also on each side of this is an open grating, on each side is a gully, one of which receives the waste from two lavatory basins on dormitory floor, and they will in all probability be used to empty the slops down.”

The meal was partaken of at midday on Sunday, the 11th September, and the symptoms of illness commenced the same evening. Details of number affected and of symptoms are appended.

Number of students who had meat and cucumber on Sunday,	
September 11th, at 1 p.m. and were ill	84
Number of students who had meat and cucumber and were	
not ill	20
Number of domestic servants who had meat and cucumber	
and were ill	6
Number of domestic servants who had meat and cucumber	
and were not ill	3
Number of students who had meat only and were ill	15
Number of students who had meat only and were not ill	1

All who did not partake of the meat and cucumber, *i.e.*, 5 students who were out for dinner and 12 of the teaching and resident staff, 17 in all, escaped illness.

All the students were females between the ages of 18 and 21 years.

The domestic staff consisted of middle-aged cook and young adult female and one boy, aged 16 years.

All students were previously in good health.

The beef was obtained on Friday, in a quantity of 50 lbs. and was boiled 10 hours in a large steamer of a capacity of, roughly, 20 gallons. It was then taken out by the cook, boned, and pressed by means of a board and a weight (14 lbs.).

No diarrhœal illness had recently occurred among members of the kitchen staff or their families.

### **Onset of Illness.**

One girl fainted in Church between 7 and 7.30 p.m. (about six hours after the mid-day dinner). The boy and several others also complained of illness the same evening, but in the majority acute symptoms commenced about 2 or 3 a.m. on Monday, the 12th.

### **Clinical Symptoms.**

Diarrhœa with intense abdominal pain and occasional vomiting were noticed in every case. The temperature varied in different cases from 99 deg. to 102 deg. F. Headache was complained of in varying degrees of severity during the next two days. In several cases the tongue became very furred and the breath heavy, but was not particularly offensive. None of the patients had a rigor and no urticarial manifestations or skin eruptions were noted in any case. After treatment by salol, followed the next day by castor oil, all showed marked improvement, and with one exception were practically well on Thursday, 15th September. This latter case is one of the few whose temperature reached 102 deg., and her temperature became normal on Thursday night and she was practically convalescent on Friday, 16th September.

### Professor Delépine's Report.

Professor Delépine's report confirmed the suspicion that the beef was the cause of the illnesses. In addition to this food, six samples of the blood of the patients who were ill, and samples of the fæces from two of the latter were also examined. The report was as follows:—

“ On September 12th, Dr. F. A. Sharpe, on behalf of Dr. Brindley, handed over to me about 2 lbs. of boiled beef, to the consumption of which an outbreak of food poisoning had been attributed, together with a wooden disc or platter upon which the meat had been pressed. On September 14th, I received six samples of blood and two samples of fæces obtained from patients who had partaken of the beef and been ill. These samples of blood and fæces had been sent at my request for the purpose of completing and controlling the results which the experimental and bacteriological examination of the meat and wood might yield. I immediately requested Dr. Sellers to investigate these products according to the methods which have yielded results in previous investigations which I had conducted myself or which I had asked Dr. Sellers to conduct.

“ From the results obtained by Dr. Sellers, and which are summed up on the enclosed report, I am of opinion that the outbreak was due to the contamination of the meat with a bacillus belonging to the group of paratyphoid bacilli and closely allied with the bacillus enteritidis of Gaertner. The bacillus obtained in this instance is much less virulent than several of the strains or varieties which either Dr. Sellers or myself have isolated in connection with previous outbreaks, including the outbreak which I investigated in 1902 for the Derby Sanitary Committee, but we have also investigated cases of food poisoning due to bacilli of no greater virulence than those obtained in the present instance.

“ From the distribution of the bacilli in the meat, it seems clear that the meat must have become infected while allowed to stand in the cellar, where it was exposed to contamination coming from the street through the grid. Whether dust or flies are to blame is not very material; infections might have been carried by either.

(Signed) SHERIDAN DELÉPINE.”

Details of the investigations are given in Appendix V.



TABLE XI.—Showing the means of the Meteorological Observations taken at the Derbyshire Royal Infirmary for the 12 months ended 31st December, 1910.

1910.	THERMOMETERS.				Rainfall in inches.		Greatest fall in 24 hours.		No. of Rainy days, 1910.
	Dry Bulb.	Wet Bulb.	Shade Temperature.		Infirmary Grounds 1910.	1909.	Amount in inches.	Date.	
			Maxi-mum.	Mini-mum.					
January ...	37·1	36·7	43·2	33·0	2·09	1·21	·40	23rd.	20
February...	39·9	38·9	46·7	35·5	1·96	0·61	·23	20th.	25
March .	42·2	39·8	51·2	35·6	0·48	3·09	·20	7th.	8
April ...	46·4	43·0	53·1	38·6	1·66	1·47	·33	28th.	17
May ...	52·9	49·3	61·2	44·9	2·34	1·82	·44	31st.	19
June ...	60·2	55·5	68·3	51·4	1·447	2·17	·46	24th.	12
July ...	58·6	54·3	65·4	51·5	2·54	3·07	·67	5th.	11
August ..	60·3	56·7	67·7	53·5	3·21	2·38	·50	23rd.	23
September	55·2	52·0	62·0	48·6	·56	2·34	·44	14th.	5
October ...	51·5	48·8	56·8	46·7	2·13	3·26	·69	11th.	19
November	36·3	35·2	43·6	32·1	4·05	0·43	·92	27th.	20
December	43·3	42·0	47·5	39·4	3·84	4·10	·94	1st.	25

The highest mean shade temperatures were registered during the month of June. The greatest variation between the maximum and minimum temperature was observed during the months of May and June. November was the coldest month, and most rain fell during the months of November and December. The greatest number of rainy days was observed in February and December. The heaviest amount of rainfall in twenty-four hours was on the 1st December, when 0·94 inches fell. The nearest approach to this was on 27th November, when ·92 inches fell.

## SUMMARY OF VISITS PAID BY HEALTH VISITOR AND WOMEN INSPECTORS.

Visits <i>re</i> Births	...	...	...	...	...	2,875
Re-visits <i>re</i> Births	...	...	...	...	...	1,197
Visits <i>re</i> Still Births	...	...	...	...	...	81
,, Deaths of Infants under 1 year	...	...	...	...	...	200
,, Phthisis	...	...	...	...	...	308
,, Disinfections	...	...	...	...	...	55
,, Whooping Cough Deaths	...	...	...	...	...	10
,, Measles (Deaths)	...	...	...	...	...	9
,, Diarrhœa (Deaths)	...	...	...	...	...	17
,, Cases of Puerperal Fever	...	...	...	...	...	21
,, Midwives	...	...	...	...	...	210
,, Measles	...	...	...	...	...	11
,, Whooping Cough	...	...	...	...	...	10
,, Special Visits	...	...	...	...	...	85
,, Enquiries	...	...	...	...	...	142
,, Enquiries for Central Midwives Board	...	...	...	...	...	2
,, Complaints	...	...	...	...	...	10
,, Out-workers	...	...	...	...	...	517
,, Workrooms	...	...	...	...	...	220
Unsuccessful Visits (outs, removals, etc.)	...	...	...	...	...	1,294
Eleven Enteric Fever cases removed to Derby Infirmary.						
Mothers' Welcome held 40 afternoons.						

## REPORT ON WOMEN INSPECTORS' AND HEALTH VISITORS' WORK.

Miss Davies, Senior Woman Inspector, reports as follows:—

The Notification of Births Act has now been in force in Derby for three years, and has proved exceedingly valuable.

Owing to information we obtain through the Act we are able to visit (where this is thought necessary) much earlier than before the Act was adopted.

This is especially useful in detecting cases of ophthalmia and other eye troubles; though the rules of the Central Midwives Board are very clear on this point and require that medical aid be summoned

for any inflammation of the eyes however slight; the mother (and it must be admitted that in some cases the midwife) prefers to try various remedies of her own first.

Whilst visiting we have come across 164 cases in which the eyes needed some attention; 29 of these were serious cases, and needed prompt medical attention; these were re-visited frequently, and fortunately no bad effects resulted.

A list of births notified is sent to the Registrar monthly, and is compared with those notified to him, by this means it is possible to check any mistake. This method was useful in detecting cases attended by unqualified women who were not allowed to practice after April, 1910. In these instances the birth was not notified by the father or person in attendance, but intimation was received from the Registrar.

In one case where the birth was registered but not notified we called several times for an explanation, but were unable to obtain a reply; a letter was then sent from the Medical Officer of Health asking for an explanation, and as no notice was taken of this the father was prosecuted under the Notification of Births Act and a fine imposed.

We have recommended medical advice to be sought in 182 instances, either for the mother or infant or another member of the family.

We constantly endeavour to impress upon the mother the superiority of the breast over any other method of feeding an infant up to nine months; but in some cases, where the ninth month is reached during July, August or September, we recommend that breast feeding be continued for at least a month longer, thus lessening the risk of the infant suffering from diarrhoea.

If the mother's milk is not sufficient we advise her the most suitable diet to improve it; failing this we give detailed instructions as to the best method of supplementing. A popular fallacy that mother's milk and cow's milk together will not agree with the infant is responsible for a great deal of harm. There is still a tendency, especially among young mothers, to try some of the

patent foods that flood the market, they being under the impression that the baby needs something more substantial than mother's milk or milk and water.

To instance one case visited during 1910.

No. 168. This was the ninth baby (six of the previous ones were living but were pale and small). The mother had never been able to keep her milk for any of the previous children over one month. She, however, persevered with the diet suggested, and was able to nurse her child until the eighth month with the addition of one meal of milk and water from the seventh month, and this is the bonniest baby she has had.

Among the infants under observation during 1910

2,214 were breast-fed entirely,

405 were breast-fed with the addition of some other food,

287 were hand-fed.

In the case of hand-fed children, the long tube bottle is becoming less common, more mothers now recognising that apart from the difficulty of cleansing it is often the cause of many digestive disturbances. Whenever these bottles are used one invariably finds the baby on its back feeding itself from a bottle more or less full, and on questioning the mother or person in charge as to the proportions of food in the bottle, it is obvious that the quantities have been guessed.

The mortality among infants, however good their surroundings, arises from many causes. In Derby, during 1910, of 266 deaths under one year, 33 were certified as being prematurely born, and on enquiries being made it was found that in eight other cases (neither of these lived more than one day) the children were prematurely born, but the deaths were certified otherwise; five were born with malformations, and 10 were not visited (two of these having died in the Workhouse Infirmary). Making due allowance for these, it is plain that in the poorer districts the necessary care and attention is not given to infants; this may be due to a variety of causes, chief among these being ignorance and poverty.

Of the deaths among children under observation

84 were breast-fed = 3·8%,

52 were breast-fed with other additions, or 12·8%,

53 were hand-fed entirely, or 18·5%.

## INSPECTIONS OF WORKROOMS.

Workrooms include any premises (not being factories) in which manual labour is exercised by way of trade or for purposes of gain, in or incidental to the making, altering, finishing, repairing, or adapting for sale any article, to or over which the employer of the person working has right of access or control.

At the end of 1910 there were 210 workrooms and work-places on the register where women are employed; of these 23 were notified during 1910. Twenty-seven were found to require cleansing, in six cases the ventilation was insufficient, five gas-irons were improperly fixed, in nine cases the sanitary accommodation was found to be unsuitable or defective, and in one case not separate for the sexes.

With a few exceptions all these defects have been remedied on a verbal notice being given. It has only been necessary to serve Statutory notices in five instances, the occupier in most cases attended to the infringement directly it was brought to his notice.

The workrooms were on the whole in a fairly satisfactory condition, but it is still difficult to convince the employees of the necessity for constant ventilation.

## INSPECTION OF OUT-WORKERS.

In accordance with section 107 of the Factory and Workshops Act, lists have been received from the various firms employing out-workers within the Borough.

Lists have also been received from and forwarded to other Councils in whose districts the employer or out-worker worked. We have 425 out-workers in the Borough of Derby engaged in net and lace mending, 94 in the different branches of tailoring, 67 in hosiery work, and 13 in various other trades.

The homes of the workers, with few exceptions, show a fair standard of cleanliness. This is not generally the case with out-workers, but the skill required for the work in Derby demands a better class of workers than many other branches of home work, *e.g.*, box making, paper-bag making, sack making, and carding buttons. Some of these are very badly paid,

It is found that the homes where the work is taken in to supplement the income are kept in a better condition than in those where it is the only means of support. Sixty-four verbal notices and 20 Statutory notices were served during the year, chiefly for dirty conditions.

### INSPECTION OF MIDWIVES.

Seventy-three midwives notified their intention to practice during 1910. No unregistered woman was allowed to practice after April 1st, 1910. Letters were sent to all unregistered women practising, drawing their attention to the provisions of the Act and the penalty it entailed. In spite of this, one woman continued practising. She was cautioned by the Midwives Committee, and has not again ventured to contravene the Act. There is nothing to prevent these women from taking a case with a doctor. The standard of midwives is certainly improving. Of the 73 who notified their intention to practice, 30 are women who were in *bona-fide* practice for one year prior to July 31st, 1902. 28 are certified trained women connected with the Royal Nursing Institution, 9 are certified trained women working on their own account, 2 are certified trained women working as maternity nurses only, and 4 are certified trained women not practising.

All midwives with the exception of those practising in public institutions have had their case books, outfits, and places of residence regularly inspected.

The number of visits vary from two or three in the case of the more competent women to seven or nine in the case of the careless or incompetent, whilst with some a distinct improvement is noticed and they endeavour to keep the rules. There are others who need constant visiting; these are chiefly older women who have been allowed to go on in their own way for many years, and do not realize the responsibility of the position which the passing of the Midwives Act has placed them. With these it is necessary to explain the various rules drawn up by the Central Midwives Board very frequently, and one can only have patience and hope for a permanent improvement, at the same time remembering that it is possible the Act may press rather heavily on women who have followed the arduous calling of midwifery for many years without any supervision whatever.

As a result of frequent infringements of the rules, and after many cautions, Midwife 17501 was summoned to appear before the Midwives Sub-Committee to answer the charges brought against her. She did not attend and was again summoned, but still refused to attend. The case was reported to the Central Midwives Board, and the midwife struck off the roll. The following were the charges brought against her:—

### Rules Neglected by Midwife 17501.

From 7th September, 1908, to 7th February, 1910.

- (a) Charged with habitual uncleanness.
- (b) Not having proper appliances.
- (c) Not keeping a register of cases.
- (d) Not notifying births.
- (e) Not attending Public Health Department when requested by Medical Officer of Health to explain the charges brought against her.
- (f) Not attending meeting of Midwives Sub-Committee when summoned.

One *bona-fide* midwife was suspended from practice by the Central Midwives Board for six months on a serious charge. She was allowed to practice again after two reports were sent to the Board of her good conduct.

During the year 9 midwives were interviewed by the Medical Officer of Health, and 5 were subsequently reprimanded by the Midwives Sub-Committee.

The procedure before summoning a midwife to appear before the Midwives Committee is usually as follows:—

- 1st complaint, a caution.
- 2nd        ,,       a letter from the Medical Officer of Health.
- 3rd        ,,       Interviewed by the Medical Officer of Health.
- 4th        ,,       Summoned to appear before the Midwives Committee.

Eleven letters were sent for non-compliance of rules (unsatisfactory bags, case-books, or appliances, or failure to send in medical aid form), 5 were sent for failing to notify births within 36 hours, 15 were sent to the Central Midwives Board (of these 6 notified changes of address), 8 related to the practice of two women reported to the Board, and 1 reported a death.

## STILL BIRTHS.

One hundred and three still births were notified during 1910, as compared with 135 in 1909. Many of those were visited and the circumstances of the case enquired into. Enquiries have also been made of the midwife in attendance. The fact that these cases are visited acts as a deterrent from any malpractice. An opportunity is also given to advise the mother to consult a doctor at another time if this is thought necessary.

159 records of having sent for medical aid have been received, compared with 157 in 1909, 122 in 1908, and 65 in 1907.

## MOTHERS' AND BABIES' WELCOME.

The first meeting in Derby of a Mothers' and Babies' Welcome was held on January 26th, 1910, when six mothers attended to have their babies weighed.

Wednesday afternoon of each week is now given up to the mothers to weigh the babies and help the mothers to make woollen vests or other articles of clothing, and give any advice in our power.

Many mothers have taken advantage of our help, and we now have the pleasure of seeing many babies in what we term "our vests."

When the mother is unable to buy the wool we make the purchase and allow her to pay for it as she is able. Needless to say, this often happens, many not being able to pay for more than one, but as our object is to get the baby into woollen vests before the winter sets in we are only too glad to be able to help her.

A gift of 1 lb. of wool has greatly helped us to give a few vests to mothers who could not possibly afford them. Another lady has given vests and other friends have helped to make them.

We record the weight each week on a card provided for the purpose. This is of great interest to the father as well as the mother. One can then see at a glance if the child is improving; if not, we advise the mother to seek medical advice at once.

Though increase in weight is not always a certain indication that the child is progressing, taking other symptoms into consideration, it is a help. It arouses the interest of the parents.

The improvement in general cleanliness both of the mother and baby is most marked, though some of our regular attendants are very nice women.

We give a cup of tea and a biscuit to each mother. This is greatly appreciated, especially after a long walk.

Since our first meeting we have enrolled 143 members. Some have only attended once, out of curiosity, but many have attended regularly week after week. One mother has attended 33 weeks out of 60, often coming through the rain (we look upon this baby as almost our own). When he first attended he was a small unsatisfactory child, fed on Nestle's milk from a long tube bottle. For three or four weeks he did not gain one ounce. We eventually persuaded the mother to give up the "long tube" bottle and give him milk and water. From that time he has gained regularly, and is now a fine strong child.

It must be admitted that the very poorest mothers are on the whole slower to avail themselves of the Welcome than are the wives of the average working-man. Certainly the latter class are more intelligent, and are best able to profit by the advice given.

Two mothers and babies have attended 33 times.

Three	„	„	„	17	„
-------	---	---	---	----	---

Two	„	„	„	16	„
-----	---	---	---	----	---

These are a few of our attendances.

The average cost works out at about 3s. per week.

This does not include the rent of the rooms. Miss Longdon (with the consent of the Society of Friends) having placed these, together with heating apparatus, at our disposal, thus reducing our expenses considerably. The Caretaker is paid 1s. 6d. per week.

A cradle is on view, adapted from a banana crate, which is covered inside and out with unbleached calico and fitted with a bed and pillow filled with chaff. The entire cost of this was 1s.

The workers consist of Nurse Walls, Miss Smart, one voluntary helper, and myself. This has taken about 40 half-days from each of us for visiting, but the loss in visits is balanced by being able to interview more mothers than one possibly could in an afternoon's work.

The following are the tables of action taken and work done, which are required to be forwarded to Secretary of State.

### 1.—INSPECTIONS.

Including inspections made by Sanitary Inspectors or Inspectors of Nuisances.

PREMISES.	NUMBER OF		
	INSPEC- TIONS.	WRITTEN NOTICES.	PROSE- CUTIONS.
Factories (including Factory Laundries)	178	8 & 17 Verbal.	0
Workshops (including Workshop Laundries) .. ..	1057	63 & 169 Verbal.	0
Work Places (other than out-workers' premises) .. ..	0	0	0
Total .. ..	1235	71 & 186 Verbal.	0

### 2.—DEFECTS FOUND.

Particulars.	Number of Defects			Number of Prosecu- tions
	Found	Remedied.	Referred to H.M. Inspector	
Nuisances under the P.H. Acts—				
Want of Cleanliness ..	52	41	0	0
Want of Ventilation ..	28	25	0	0
Overcrowding .. ..	4	4	0	0
Want of Drainage of floors	0	0	0	0
Other Nuisances .. ..	34	29	0	0
Sanitary Accommodation—				
Insufficient .. ..	11	9	0	0
Unsuitable or Defective ..	55	47	0	0
Not separate for sexes ..	2	1	0	0
Offences under the F. & W. Act—				
Illegal occupation of un- derground bakehouse (S. 101) .. ..	0	0	0	0
Breach of Special Sanitary requirements for Bake- houses (SS. 97 to 100)	111	118	0	0
Other Offences .. ..	0	0	0	0
Total .. ..	297	274	0	0

## 3.—HOME WORK.

	NATURE OF WORK.		
	Making Wearing Apparel.	Making Lace and Net.	Total.
Twice a year—			
Lists .. .. .	84	12	96
Contractor's Outworkers ..	3	0	3
Workmen .. .. .	329	947	1276
Once a year— ..			
Lists .. .. .	3	0	3
Workmen .. .. .	12	0	12
Addresses of Out-workers—			
Received from other Councils	8	0	8
Forwarded to other Councils	7	75	82
Outwork in Unwholesome Premises—			
Instances .. .. .	22	47	69
Notices Served .. .. .	7	17	24
Inspection of Premises ..	184	351	535
Notices served to remedy Defects .. .. .	0	0	0
Outwork in Infected Premises	2	2	4

## 4.—REGISTERED WORKSHOPS.

Total number of workshops on Register .. 442

## 5.—OTHER MATTERS.

Notified to H.M. Inspector of Factories :—

Failure to affix Abstract (S. 133) .. .. .	0
Action taken in matters referred to H.M. Inspector as remediable under the Public Health Acts but not under the Factory & Workshops Act (S. 5) }	Notified by H.M. Inspector .. .. 90
	Reports sent to H.M. Inspector 96
Complaint returned as "No action necessary" .. .. .	0
Underground Bakehouses (S.101)	
Certificates granted during the year .. .. .	0
In use at the end of the year .. .. .	1

## Sanitary Inspector's Report, 1910.



GENTLEMEN,

I beg to submit my Report of work done in the Sanitary Department during 1910, which includes, as heretofore, particulars of operations directed by the Sanitary, Plant and Stores, and Markets Committees.

### Ford Street Stables.

(Administered under the direction of the Plant & Stores Committee).

Number of Horses at beginning of year	...	60	
Bought during the year	...	13	
			— 73
Disposed of	...	14	
Inspector's Department	...	38	
Surveyor's Department	...	16	
Police and Fire Department	...	5	
			— 59 —

### Privy and Ashpit Cleansing.

Night-work—Privies Cleansed	...	3,950
„ Ashpits Cleansed	...	2,247
„ Privy Cesspools Cleansed	...	301
Day-work—Dry Ashpits Cleansed	...	550

### Refuse Collected.

Night-work—Loads, Excreta only	...	3,904
„ „ Ashes and Excreta	...	2,028
„ „ Ashes only	...	1,707
Day-work— „ Ashes, etc.	...	26,795
Offal and Trade Refuse carted by Producers—Loads	...	1,089
		— 35,523 —

### Refuse Disposal.

Disposed of as Manure—By Boats, 262 loads.

By Customers' own carts, 672 tons, 10 cwts.

Delivered to Farmers from pits, 1,673  
cart loads.

Deposited on Tips, 7,415 cart loads.

Burned in the Destructors, 22,647 tons, 11 cwts.

Extracted from Refuse and Sold, 27 tons, 16 cwts., 2 qrs. scrap iron.  
58 tons, 16 cwts., 2 qrs., old tins.

### Cost, calculated on Wages only.

		Average No. of Men, including hired.	Loads.	Wages only, including hired men.
Collection	Day	.. 48·10	26,795 @ 2/3·12	£3,028 7 7½
	Night	.. 20·69	7,639 @ 3/6·99	£1,368 9 10
Disposal—Chester Depot		39·69	26,435 @ 1/10·08	£2,432 9 7

### BAKEHOUSES.

Considerable improvements have been made in many of the Bakehouses during the past year, several having been entirely remodelled, floors relaid, more efficient ventilation provided, and the walls lined with white glazed bricks or finished with smooth hard cement and painted and varnished to facilitate easy and thorough cleansing. Old ovens are being rapidly replaced by others constructed on up-to-date principles and fired from outside, thus obviating dust and fumes, inseparable from the old types, and contributing greatly to the cleanliness of the places and improvement of the food produced.

Bakehouses in occupation	...	...	...	...	...	101
New Bakehouses	...	...	...	...	...	1
Empty Bakehouses re-occupied during year	...	...	...	...	...	2
Bakehouses re-entered on Register	...	...	...	...	...	2
					—	106
Transferred to Factory List	...	...	...	...	...	1
Vacated during the year	...	...	...	...	...	5
Total Workshop Bakehouses at end of 1910	...	...	...	...	...	100
Unoccupied at commencement of year	...	...	...	...	...	44
Add places since vacated	...	...	...	...	...	5
					—	49

Deduct re-occupied	...	...	...	...	2	
Deduct demolished	...	...	...	...	2	
					—	4
Total unoccupied at end of year	...	...	...	...		45
Visits to unoccupied Bakehouses...	...	...	...	...	...	169
Visits to occupied Bakehouses	...	...	...	...	...	465
Written notices served	...	...	...	...	...	6
Verbal notices given	...	...	...	...	...	105
Sanitary Work :—						
Defects found	...	...	...	...	...	111
Remedied	...	...	...	...	...	118
(including 6 from 1909).						

Complaints not cleared but carried forward ... .. 3

The following nuisances, included in those remedied above, were dealt with on receipt of notice from His Majesty's Inspector of Factories :—

For Limewashing	...	...	6
Other defects	...	...	2

## ANNUAL REPORT FOR THE YEAR 1910

in accordance with Sec. 3, Canal Boats Act, 1884

1. Inspector and salary. Chief Inspector and Assistant (no salary allocated). Address: 16, Ford Street, Derby.

2. Boats Inspected, 65. Visits to Canal, 97.

3. Infringements of Acts and Regulations :—

(a) Registration	...	...	0	(i) Painting	...	...	2
(b) Change of Master	...	...	0	(j) Provision of Water Cask	...	...	2
(c) No Certificate on Board	...	...	1	(k) Removal of Bilge Water	...	...	0
(d) Absence of Marking	...	...	1	(l) Notification of Infectious	...	...	0
(e) Overcrowding	...	...	3	Disease	...	...	0
(f) Separation of Sexes	...	...	2	(m) Admittance of Inspector	...	...	0
(g) Cleanliness	...	...	3	(n) Boats found in bad re-	...	...	4
(h) Ventilation	...	...	0	pair	...	...	4

4. Legal Proceedings, none.

5. Other steps taken: 10 caution forms sent, each complaint cleared.

6. Cases of Infectious Disease dealt with, none.
7. Detention of Boats for cleansing and disinfection, none.
8. Number of Boats on Derby Register at end of year, 18.
  - (a) Number of Boats believed to be in use, 9.
  - (b) Number of Boats which cannot be traced, 9.
9. Number of Boats registered during 1910, 1.
  - (a) Boats taken off Register, 3.

(Copy submitted to the Town Clerk for transmission to the L.G.B.  
7th January, 1911).

### Common Lodging Houses.

There are 20 houses on the Register, having 133 sleeping rooms, with convenience for 674 adult persons and 28 children.

Visits of Inspection, 1,020.

Notices given (verbal and written) for various breaches of Bye-laws, etc., 249, all of which have received attention, and been remedied.

The only change made has been the transfer of two houses to new occupiers. Several night inspections were made by Inspector Hanson, who found no contraventions.

### Houses Let in Lodgings.

On Register at beginning of year	...	...	...	35
Added during year	...	...	...	1
			—	36
Closed	...	...	...	1
			—	35
On Register at end of year	...	...	...	35
Visits of Inspection	...	...	...	1,469
Notices served	...	...	...	213
Contraventions remedied	...	...	...	212

### Dairies, Cowsheds, and Milkshops.

Cowkeepers within the Borough:—

On Register	...	...	...	29
New registrations added	...	...	...	2
			—	31

Removed from Register	...	...	...	...	8
Number left on Register	...	...	...	...	23
Inspector's Visits	...	...	...	...	130
Dairymen and Purveyor's within the Borough:—					
On Register	...	...	...	...	419
New registrations	...	...	...	...	120
					— 539
Removed from Register	...	...	...	...	97
Number left on Register	...	...	...	...	442
Inspector's Visits	...	...	...	...	1,599
Notices served on occupiers	...	...	...	...	294
Contraventions remedied	...	...	...	...	294
Registered Purveyors who live outside the Borough:—					
At 1st January, 1910	...	...	...	...	161
New registrations	...	...	...	...	11
					— 172
Removed from Register	...	...	...	...	3
Total	...	...	...	...	169

### Diseases of Animals Acts.

(Administered under the direction of the Markets Committee).

The amount of work to be done under this heading is always an uncertainty, as it is not possible to forecast or make any special preparation, and any outbreak of disease has to be dealt with as speedily and as efficiently as possible by using a staff already fully employed on other work.

#### Anthrax.

No cases have been reported in the Borough, but several have arisen in the County round about us. The disease appears very much on the increase, especially in cattle, and a new Order has been made, to come into force next year, demanding greater attention and stringency in dealing with this dangerous ailment.

#### Sheep Scab.

The Order relating to this disease has remained in force, necessitating close supervision of the Markets to see that dipping had been carried out as required by the Special Order. Some hundreds of licences have to be received and issued during the dipping period,

but I believe this is work that pays in the reduction and prevention of disease and in increased health and money value of the animals themselves.

### Swine Fever.

We have remained under the restrictions imposed by the Swine Fever Movement Order, and two dealers having licensed sale-yards are still under the necessity of obtaining from me licenses for the removal of all swine sent out from their premises and for many of the pigs brought in.

One outbreak of Swine Fever was reported on premises where there were five pigs, and one had died with suspicious symptoms, but a post-mortem examination by the Veterinary Inspector proved that it was not Swine Fever, and this report was further verified by the rest of the pigs remaining free from disease.

Special inspections have been made throughout the year of the Siddalls Allotment Gardens under the Special Order relating thereto, and licenses issued for removal of swine both to and from the gardens. This Order still remains in force, and is likely to do so for some time yet, owing to the building of new brick sties in substitution for the old insanitary wooden ones being a slow and somewhat expensive job for the workingmen tenants, but all who have made the change are well satisfied with the improved conditions of keeping.

The weekly cleansing and disinfection of pig dealers premises, carts, etc., has been continued during the year under the personal supervision of Mr. Turner, Inspector of Meat, Slaughter-houses, etc. One prosecution was taken under the Cattle Market Bye-laws for sending a diseased pig into the Market, and the defendant fined.

### Removal of Nuisances.

Abatement of nuisances has, as heretofore, been obtained by the service of preliminary notices, 2,467 having been issued during the year.

Complaints made at the office have numbered 621, each of which has been inquired into and dealt with.

Only two reports were made to the Sanitary Committee for legal proceedings, and one notice served, on which no further

action was necessary, the other case being dealt with on preliminary notice, so that the whole of the sanitary work has been carried out without a single appeal to the Magistrates, a fact that speaks well for the judgment, ability, and tact of the District Inspectors.

Forty-five complaints have been referred to the Borough Surveyor as coming within the scope of his duties.

Particulars of nuisances dealt with and work done in connection with factory and workshops have been supplied to the Medical Officer of Health.

Special attention is directed to changes taking place in the character of sanitary conveniences connected with dwellings, shops, workshops, etc. The conversion of old privies, cesspools, and tub closets has meant a great reduction in the work to be done at night, and to some extent a decrease in the cost, although much of it has simply been transferred from night to day.

Not many years ago 14 horses and the corresponding staff of men were needed on night work, but only six are now required. Appended to this report will be found a table which makes the changes more apparent, the conveniences in 1893 and at the present time being shown.

Indirectly this table represents more work than appears on the surface, as in nine cases out of ten, where w.c.'s are substituted, the whole of the drains have been reconstructed, made watertight, provided with disconnection, ventilation, and ready means of inspection.

Reduction of tub closets too is steadily proceeding on the same lines, and the rest, convenience and health of the inhabitants, already greatly enhanced, will be still further improved when we can transfer the entire work of collection from night to day.

The column headed "Ash Receptacles" indicates that there are, or should be, this number provided, but unfortunately properly constructed covered sanitary bins are not the rule, owners having been very remiss in their duty in this respect, but as there is no doubt whatever as to the legal responsibility for making the provision, closer attention must be directed thereto. Wet "house refuse" means increased nuisance to everybody, and much unnecessary cost on the rates in carting away and disposing of water which should be kept out of the receptacles.

# COUNTY BOROUGH OF DERBY.—SANITARY INSPECTOR'S DEPARTMENT.

Sanitary Accommodation as ascertained in 1893, brought up to date by records kept yearly.

At end of year.	W.C.'s.		Trough W.C.'s.			Ash Re- ceptacles.	Dry Ashpits.	Privies & Ashpits.		Privies & Cesspools.	Inhabited Houses (esti- mated).
	Ordinary.	Hand Flushed.	Burman- toft.	Tipper or Syphon.	Hand Flushed.						
1893	7,430	90	76	195	47	9,235	1,263	5,772	2,809	1,503	19,969
1899	11,459	90	79	192	40	13,194	1,252	4,897	2,354	1,263	22,685
1900	12,193	89	89	192	40	13,939	1,239	4,813	2,306	1,225	23,281
*1901	13,769	91	105	192	40	15,351	1,311	5,645	2,722	1,147	26,960
1902	14,831	91	135	189	38	16,254	1,293	5,399	2,572	1,085	27,606
1903	16,076	91	158	189	38	17,426	1,246	4,931	2,298	974	28,188
1904	16,851	91	167	189	38	18,101	1,218	4,581	2,093	900	28,445
1905	17,909	91	170	189	38	18,976	1,200	4,123	1,835	847	28,788
1906	18,810	91	182	189	42	19,222	1,159	3,687	1,577	778	29,060
1907	19,625	91	207	189	42	20,528	1,141	3,237	1,310	723	29,214
1908	20,359	91	213	189	42	21,168	1,116	2,867	1,094	683	29,422
1909	21,133	91	213	187	42	21,827	1,069	2,570	926	641	29,684
1910	21,705	91	213	190	42	22,268	1,052	2,380	815	617	29,892

\*Osmaston and portions of Normanton and Alvaston were included in the Borough in November, 1901.

## NUISANCES ABATED.

						A	B	C	X	Total.
Ashpits ...	Demolished	...	...	...	...	47	28	63	...	138
Drains ...	Cleansed and Repaired (or Soil Pipes)	...	...	...	...	270	285	230	...	785
	Disconnected from Sinks	...	...	...	...	3	9	5	...	17
	Provided (or Soil Pipes)	...	...	...	...	156	82	432	...	670
	Re-laid and New	...	...	...	...	343	162	74	...	579
	Removed from Inside Houses	...	...	...	...	17	31	36	...	84
	Waste Pipes Repaired, Renewed, Provided, &c.	...	...	...	...	27	72	28	...	127
	Soil Pipes Removed from inside Houses	...	...	...	...	...	12	13	...	25
	Brick Replaced by Salt-glazed Pipes	...	...	...	...	...	24	34	...	58
	Inlets Trapped and Inspection Chambers Provided or Repaired	...	...	...	...	384	437	409	..	1230
	Soil Pipes and Drains Ventilated	...	...	...	...	67	106	90	...	263
Houses ...	Cleansed	...	...	...	...	24	10	6	...	40
	Cellars Cleansed and Limewashed	...	...	...	...	15	17	22	...	54
	Damp Coursed and made Dry	...	...	...	...	5	2	12	...	19
	Overcrowding Prevented	...	...	...	...	1	2	1	...	4
	New Sinks Fixed	...	...	...	...	...	21	...	...	21
	Ash Bins provided	...	...	...	...	93	57	131	...	281
	Dangerous Walls or Buildings Repaired	...	...	...	...	1	3	2	...	6
	Paving of Yards and Passages	..	...	...	...	147	114	206	...	467
	Roofs, Floors, &c.	...	...	...	...	19	30	4	...	53
	Spouting Repaired, Disconnected or Provided	...	...	...	...	67	85	69	...	221
	Rooms Ventilated	...	...	...	...	1	2	...	...	3
Privies ...	Cleansed and Repaired, or new Tubs Provided	...	...	...	...	305	153	131	...	589
	Converted to W.C.'s	...	...	...	...	106	74	184	...	364
	Demolished	...	...	...	...	3	...	2	...	5
Urinals ...	Erected	...	...	...	...	1	6	2	...	9
	Removed	...	...	...	...	...	...	3	...	3
	Repaired or Cleansed	...	...	...	...	3	3	..	...	6
Water ...	Soft Water Tanks Cleansed or Repaired and Pumps Provided	...	...	...	...	25	38	11	...	74
	Disused Wells Filled in	...	...	...	...	4	18	11	...	33
	Houses provided with Town Water	...	...	...	...	2	1	9	...	12
	Covers of Tanks or Wells Repaired	...	...	...	...	...	5	1	...	6
W.C.'s ...	Cleansed or Repaired	...	...	...	...	49	39	1	...	89
	Rebuilt	...	...	...	...	...	6	...	...	6
	Flushing Water Laid on	...	...	...	...	2	15	...	..	17
	Additional Provided	...	...	...	...	7	10	17	...	34
	Lead Safes provided	...	...	...	...	...	25	...	...	25
	Fittings Repaired	...	...	...	...	26	80	18	...	124
	Ventilated	...	...	...	...	4	5	...	...	9
	Disused, Removed	...	...	...	...	...	...	...	..	2
Bakehouses	...	...	...	...	...	...	...	...	118	118
Common Lodging-houses	...	...	...	...	...	..	...	...	247	247
Dairies, Cowsheds and Milkshops	...	...	...	...	...	...	...	...	294	294
Factories and Workshops	...	...	...	...	...	45	17	12	...	74
Houses Let in Lodgings	...	...	...	...	...	...	...	...	212	212
Offensive Trades	...	...	...	...	...	...	...	...	22	22
Smoke Nuisances	...	...	...	...	...	1	1	3	...	5
Accumulations of Manure, &c., removed, and	Premises Cleansed	...	...	...	...	13	8	12	...	33
Fowls or Animals removed	...	...	...	...	...	1	1	6	...	8
Manure Pits or Cesspools repaired	...	...	...	...	...	7	6	8	...	21
Stagnant Water or Sewage from Cellars	...	...	...	...	...	16	...	3	...	19
Stables Drained or Paved, Drains removed from inside, &c.	...	...	...	...	...	4	7	5	...	16
Swill Boiling discontinued	...	...	...	...	...	...	...	1	..	1
Ice Cream	...	...	...	...	...	...	...	...	7	7
Other Nuisances	..	...	...	...	...	...	2	...	...	2
						2311	2111	2309	900	7631

## Ice Cream Dealers.

Retail premises under inspection	...	...	...	275
Added during the year	...	...	...	50
Struck of the list	...	...	...	53
On books at end of the year	...	...	...	272
Notices served	...	...	...	7
Nuisances abated	...	...	...	7
Inspector's visits	...	...	...	320

The premises where Ice Cream is sold have, on the whole, been kept in satisfactory condition, though it was found necessary to give several verbal cautions as to general cleanliness and special care of utensils employed in the business. Prompt attention was given to the requirements in all cases.

## POLICE COURT PROCEEDINGS.

No. of Cases	Complaint.	Result.	Total Cost. £ s. d.
1	Selling Milk deficient in Fat to extent of 9 % ... ..	Fined 5s. and Costs	1 5 0
1	Selling Milk with 5 grains per pint Boric preservative ...	Fined 10s. and Costs	1 14 0
1	Selling Milk deficient in Fat to extent of 13·4 % ... ..	Fined 10s. and Costs	1 9 0
1	Being in possession of unsound Beef ... ..	Fined £10 and Costs	10 15 0
1	Being in possession of unsound Beef .. ...	Fined £10 and Costs	10 11 0
1	Sending diseased Pig into Market ... ..	Fined 5s. and Costs	1 2 6
1	Selling Milk deficient in Fat to extent of 22·3 % ... ..	Fined 10s. and Costs	1 9 0
1	Selling Adulterated Milk— Added Water 4·1 parts ...	Dismissed	
1	Selling Adulterated Milk— Added Water 5·3 parts ..	Pay Costs ... ..	0 8 6
1	Selling Adulterated Milk— Added Water 3·4 parts ...	Pay Costs ... ..	0 8 6
2	Selling Milk deficient in Fat to extent of 11·7 % ... ..	Pay Costs ... ..	1 14 0
	Selling Milk with 5·4 grains per pint Boric preservative	Fined 10s. and Costs	

*See special notes to Food and Drugs Table.*

### Registered Slaughter-houses.

In use at end of 1910 :—

In hands of private holders	...	...	...	...	42
Corporation houses let to private tenants	...	...	...	...	12
Corporation houses used as public	...	...	...	...	2
Corporation houses standing empty	...	...	...	...	6
Private houses standing empty	...	...	...	...	5
					—
					67
					—
Visits of Inspection	...	...	...	...	6,823
Two Corporation houses used for tripe dressing.					

### UNSOUND FOOD. Condemned and Destroyed.

1 Pig.	112 lbs. Hake.
2 Calves.	16 lbs. Kidneys (Beasts').
1 Chicken.	27 lbs. Kidneys (Sheeps').
220 Rabbits.	168 lbs. Kippers.
4013 lbs. Beef	3047 $\frac{3}{4}$ lbs. Lungs, Livers, etc.
490 lbs. Bloaters.	85 lbs. Mutton.
96 lbs. Bilberries.	7420 lbs. Mussels.
481 lbs. Cod Fish.	374 lbs. Mackerel.
26 $\frac{1}{2}$ lbs. Cat Fish.	7 lbs. Plaice.
266 lbs. Chitterlings.	100 lbs. Prawns.
140 lbs. Cherries.	2130 lbs. Pears.
285 lbs. Fish Fillets.	48 lbs. Plums.
182 lbs. Findon Codling.	5 lbs. Pine Apple Chunks.
28 lbs. Fish Roe.	420 lbs. Tomatoes.
1008 lbs. Gooseberries.	250 lbs. Tripe.
1540 lbs. Herrings.	60 lbs. Veal.
14 lbs. Haddock.	

### Food and Drugs Acts.

Samples submitted to the Borough Analyst (Mr. Otto Hehner).

Samples.	Article.	Genuine.	Adulterated.
26	Butter ... ..	26	—
85	Milk ... ..	73	12
111		99	12

*10.81% of Samples tested were adulterated.*

The main feature in food analysis has been the evident tampering with the quality of the milk sold by retailers, several samples clearly indicating impoverishment before disposal, *i.e.*, that milk was not being sold in its natural state as it comes from the cow.

In some parts of the country, where I am inclined to think the milk receives similar treatment, it is seriously contended that the presumptive standard fixed by the Board of Agriculture is too high, and that the ordinary cow cannot produce “standard milk.”

As an interesting comment upon such an unfounded contention, I submit a table giving the detail results of analysis of 15 samples of milk taken by me personally at point of delivery to a dairyman in the Borough. Seven of them were still warm when delivered, and eight quite cold, the latter having stood from the previous night. The greatest possible care was taken to thoroughly stir the contents of each churn, and the samples were taken in the street before the dairyman touched them.

It is also worthy of special note that these were taken in the third week of December.

## Borough Analyst's Reports on 15 (December) Milks.

	<i>Fat.</i>	<i>Solids not Fat.</i>	<i>Total Solids.</i>
Government Standard	<b>3·00</b>	<b>8·50</b>	<b>11·50</b>
	3·72	8·98	12·70
	3·65	8·95	12·60
	3·73	9·25	12·98
	3·40	8·98	12·38
	4·07	8·87	12·94
	3·55	8·90	12·45
	4·62	8·68	13·30
	3·83	8·50	12·33
	3·65	8·89	12·54
	3·63	8·95	12·58
	3·67	8·81	12·48
	3·37	8·85	12·22
	3·98	8·95	12·93
	3·97	8·94	12·91
	3·58	8·64	12·22

## Offensive Trades.

The following are the offensive trades carried on within the Borough under periodical inspection:—

Bone Boiling	...	...	...	1
Gut Scraping	...	...	...	1
Hide and Skin Markets	...	...	...	2
Parchment Making	...	...	...	1
Skin Curing	...	...	...	1
Soap Boiling	...	...	...	1
Tallow Melting	...	...	...	1
Tripe Boiling	...	...	...	7
Varnish Making	...	...	...	1
Marine Stores	...	...	...	2

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18

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Visits, 106.

Notices, 22.

Defects remedied, 22.

WILLIAM WILKINSON,  
Chief Sanitary Inspector,

## Borough Surveyor's Report, 1910.



### Manholes Constructed during 1910

Liversage Street	...	...	1	Carrington Street	...	...	2
Stockbrook Road	...	...	1	Park Street	...	...	1
Lodge Lane	...	...	1	Midland Place	...	...	1
Stockbrook Street	...	...	1	Wilson Street	...	...	1
Litchurch Lane	...	...	3	Horton Street	...	...	1
Nottingham Road	...	...	1	Mansfield Road	...	...	1
Parliament Street	...	...	1	Talbot Street	...	...	1
Shaw Street	...	...	1	Richardson Street	...	...	1
Uttoxeter Old Road	...	...	1	Monk Street	...	...	1
Gerard Street	...	...	2	Handford Street	...	...	1
Boroughs Walk	...	...	2	Abbey Street	...	...	1
Boundary Road	...	...	1				—
Chambers Street	...	...	1				30
Hope Street	...	...	1				—

### Sewers Cleaned out during 1910.

	LOADS.				LOADS.		
Colville Street	...	...	4	Gt. Northern Road	...	...	5
Full Street	...	...	25	London Road	...	...	31
Sowter Road	...	...	2	St. Mark's Road	...	...	1
Bridge Gate	...	...	28	Graham Street	...	...	4
Duke Street	...	...	6	Osmaston Road	...	...	12
Nottingham Road	...	...	24	Holcombe Street	...	...	22
Litchurch Lane	...	...	17	Chambers Street	...	...	3
Drewry Lane	...	...	1	Brighton Road	...	...	4
Cattle Market	...	...	1	Harrison Street	...	...	1
Lower Dale Road	...	...	4	Francis Street	...	...	2
Stenson Lane	...	...	2	Manchester Street	...	...	5
Gilman Street	...	...	1				—
Yates Street	...	...	9				226
Hope Street	...	...	12				—

**Manholes Cleaned out during 1910.**

LOADS.			LOADS.		
Brighton Road	...	1	Duke Street	...	1
Nottingham Road	...	1	Osmaston Road	...	1
Randolph Road	...	1	St. Mark's Road	...	1
Cobden Street	...	1	Cattle Market	...	1
Upper Bainbrigge Street	...	1	Mansfield Road	...	2
Deadman's Lane	...	1			—
Boroughs Walk	...	1			15
Stanley Street	...	1			—
Carrington Street	...	1			

**New Sewers laid during 1910.**

Nil.

**Water used during 1910.**

						GALLONS.
Sewer Flushing	...	...	...	...	...	7,556,325
Court Flushing	...	...	...	...	...	942,332
Street Watering	...	...	...	...	...	7,706,000
Steam Rolling	...	...	...	...	...	1,158,640
Cabstands, Bridges, and Wood Paving	...	...	...	...	...	214,000
Footways	...	...	...	...	...	63,200
Total						17,640,497

Disinfectant Powder used during 1910, 1 ton.

Disinfectant Fluid used during 1910, 1,260 gallons.

River Dredging during 1910, 380 tons.

Markeaton Brook Cleaning during 1910, 130 tons.

JOHN WARD,  
Borough Surveyor.



Appendix I.

COUNTY BOROUGH OF DERBY.

Vital Statistics of Whole District during 1910 and previous years.

YEAR.	Population estimated to middle of each Year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions.	Deaths of Non-residents registered in Public Institutions in District.	Deaths of Residents registered in Public Institutions beyond Dist.	Nett Deaths at all ages belonging to the Dist.	
		Number.	Rate.*	Under One Year of Age.		At all Ages.					Number.	*Rate.
				Number.	Rate per 1,000 Births Registered.	Number.	*Rate.					
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1900.	104,684	2,900	27·7	504	173	1,932	18·5	342	78	nil. ... ... ... 2 3 2 4 3 ... 5	1,854	17·7
1901.	106,076	2,939	27·8	455	155	1,673	15·8	304	75		1,598	15·1
1902.	116,869	3,326	28·5	417	126	1,698	14·6	290	59		1,639	14·1
1903.	118,707	3,215	27·1	411	128	1,671	14·1	309	75		1,596	13·5
1904.	120,449	3,282	27·3	467	143	1,905	15·9	346	81		1,824	15·2
1905.	122,207	3,108	25·5	471	152	1,823	15·0	336	79		1,746	14·3
1906.	123,981	3,103	25·1	359	116	1,829	14·7	370	99		1,733	14·0
1907.	125,774	3,152	25·1	384	122	1,870	14·9	400	88		1,784	11·2
1908.	127,583	3,321	26·1	367	111	1,777	14·0	426	99		1,678	13·2
1909.	129,411	3,220	24·9	397	124	1,799	13·91	419	87		1,712	13·3
Averages for years 1900-1909.	119,574	3,157	26·4	423	134	1,798	15·04	354	82	...	1,716	14·4
1910.	131,256	3,163	24·1	274	87	1,556	11·9	437	117	5	1,444	11·01

\* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population.

NOTE.—The deaths to be included in Column 7 of this Table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term “Non-residents” is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term “Residents” is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

Area of District in acres (exclusive of area covered by water) 5,272 acres.

Total population at all ages	...	...	...	..	...	...	...	114,848	} At Census of 1901.
Number of inhabited houses	...	...	...	...	...	...	...	24,851	
Average number of persons per house	...	...	...	...	...	...	...	4·7	



## Appendix II.

Vital Statistics of separate Localities in 1910 and previous years.

[illegible]

Note re-arrangement of Ward Boundaries for 1902. It is impossible to group the old arrangement so as to render them statistically comparable with the new arrangement.



# COUNTY BOROUGH OF DERBY.

## Appendix III.

### Cases of Infectious Disease Notified during the Year 1910.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT						TOTAL CASES NOTIFIED IN EACH LOCALITY.														NO. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.																				
	At all Ages.	Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65, and upwards.	Abbey.	Arboretum.	Babington. (I)	Becket.	Bridge.	Castle.	Dale.	Derwent (H)	Friargate.	King's Mead.	Litchurch.	Markaton.	Normanton.	Osmaston.	Pear Tree.	Rowditch. (W)	Abbey.	Arboretum.	Babington. (I)	Becket.	Bridge.	Castle.	Dale.	Derwent (H)	Friargate.	King's Mead.	Litchurch.	Markaton.	Normanton.	Osmaston.	Pear Tree.	Rowditch. (W)	Total.		
Small-pox ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Cholera ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diphtheria (including Membranous Croup) ...	358	25	90	180	38	25	25	28	23	25	13	10	20	16	39	14	16	22	33	19	38	17	21	10	13	16	8	5	14	10	17	10	8	15	16	7	21	13	204		
Erysipelas ... ..	95	2	...	9	12	59	13	6	11	10	9	4	7	4	2	5	3	10	2	3	7	6	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1		
Scarlet Fever ... ..	673	4	120	467	63	18	1	19	11	37	27	29	25	39	22	138	36	39	46	49	42	26	35	20	26	20	16	22	26	13	66	29	1	11	25	27	12	15	420		
Typhus Fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Enteric Fever ... ..	28	...	...	7	6	13	2	...	...	2	1	2	6	...	2	1	1	...	...	3	3	3	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Relapsing Fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Continued Fever ... ..	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Puerperal Fever ... ..	8	...	...	...	1	7	...	...	...	...	1	3	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Plague ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Phthisis ... ..	131	...	3	17	20	85	6	11	9	4	5	5	9	5	9	9	27	7	12	2	4	5	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(Voluntary Notification)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals ... ..	1291	31	213	681	140	207	22	91	89	76	67	54	60	68	51	193	81	72	85	92	76	76	63	56	30	40	36	25	35	40	24	83	10	33	57	12	38	33	33	645	

(I) Derbyshire Royal Infirmary for treatment of Enteric Fever cases.

(H) Derby Borough Isolation Hospital for treatment of Diphtheria and Scarlet Fever cases.



#### Appendix IV.

Causes of, and Ages at, Death during 1910.

CAUSES OF DEATH.	DEATHS IN OR BELONGING TO WHOLE DISTRICT AT SUBJOINED AGES.							DEATHS IN OR BELONGING TO LOCALITIES (AT ALL AGES).																TOTAL DEATHS IN PUBLIC INSTITUTIONS IN THE DISTRICT.	STRANGERS.
	All Ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and up-ward.	Abley Ward.	Arboretum Ward.	Babington Ward.	Becket Ward.	Benge Ward.	Castle Ward.	Dale Ward.	Derwent Ward.	Finigate Ward.	King's Mead Ward.	Litchurch Ward.	Marlinton Ward.	Normanton Ward.	Osnaston Ward.	Pear Tree Ward.	Rowditch Ward.		
Small-pox .....	...	...	...	...	...	...	...	...	1	...	...	...	1	3	2	...	3	...	...	1	...	3	...	...	
Measles ... ..	14	1	13	...	...	...	...	...	1	...	...	...	1	3	2	...	3	...	...	1	...	3	...	...	
Scarlet Fever ...	4	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	
Whooping-cough ..	14	6	8	...	...	...	...	2	1	...	...	1	...	1	...	...	...	3	3	1	1	2	...	...	
Diphtheria and Membranous Group .....	22	...	8	14	...	...	...	1	2	1	2	2	...	1	...	2	...	1	...	2	3	1	4	...	
Croup .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Fever - Typhus .....	7	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other continued ..	...	...	...	...	4	...	...	...	...	...	...	...	1	...	...	1	2	1	1	...	...	1	...	5	
Epidemic Influenza ..	6	...	...	...	...	4	2	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Cholera .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	...	1	...	...	
Plague .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diarrhoea .....	28	21	2	...	...	1	1	3	2	1	3	1	3	2	1	...	1	1	2	1	2	1	1	...	
Enteritis .....	13	2	4	2	...	2	3	3	2	1	2	1	1	...	...	1	...	...	1	...	...	...	...	...	
Gastritis .....	4	...	...	...	...	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	
Enteric Fever .....	4	...	...	...	...	...	...	...	...	1	...	...	1	...	...	1	...	...	...	1	...	...	...	...	
Erysipelas .....	2	2	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	1	...	...	...	
Phthisis (Pulmonary Tuberculosis) .....	116	...	3	3	18	87	5	8	9	7	7	6	9	1	8	9	6	8	10	5	8	6	8	...	
Other Tuberculous Diseases ..	50	14	19	7	2	8	...	5	1	4	2	...	4	1	1	4	1	3	3	5	2	4	1	...	
Cancer, Malignant Disease ..	95	1	...	...	1	63	30	5	12	6	6	2	6	3	3	6	7	1	10	7	2	11	1	...	
Bronchitis .....	101	15	10	...	1	28	17	7	7	7	4	5	13	3	6	8	8	10	7	3	2	8	1	...	
Pneumonia .....	67	11	19	1	3	18	12	2	1	3	3	2	1	1	4	3	4	7	3	7	5	8	6	...	
Pleurisy .....	1	...	...	...	4	...	...	...	1	...	1	...	...	...	...	...	...	2	...	...	...	...	...	...	
Other Diseases of Respiratory Organs ..	11	...	...	...	...	8	3	...	1	...	1	2	...	...	...	...	...	1	3	1	1	1	...	...	
Alcoholism, Cirrhosis of Liver ..	15	...	...	...	...	11	4	2	1	...	1	1	1	...	1	1	...	3	1	3	1	1	...	3	
Veneral Diseases .....	3	3	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	3	1	...	...	2	1	...	
Premature Birth .....	62	62	...	...	...	...	...	5	2	1	5	5	5	1	1	5	4	4	5	5	8	2	4	...	
Diseases and Accidents of Parturition .....	6	...	...	...	...	6	...	...	...	...	...	2	...	1	...	...	...	...	1	3	1	1	...	...	
Heart Diseases .....	162	7	1	1	3	33	51	14	11	10	15	12	11	9	5	6	10	15	10	3	6	6	17	...	
Accidents .....	57	7	6	4	1	23	16	2	3	7	3	...	3	1	3	4	4	5	2	4	3	6	4	...	
Suicides .....	9	...	...	...	1	2	3	...	1	2	...	...	...	...	...	...	...	1	2	...	...	...	...	...	
Execution .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
All other causes .....	572	111	27	12	14	172	236	39	43	36	34	19	39	41	26	40	48	41	37	35	26	39	26	...	
All causes .....	1444	266	125	53	49	538	113	100	103	88	92	62	102	85	61	94	107	100	100	89	77	94	90	...	
Non-Residents .....	117	8	6	11	11	61	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
																								...	
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## APPENDIX V.

*Boiled Beef.*—The specimen of beef sent for examination weighed about 2 lbs. There was no bad odour or other evidence of putrefaction.

For the purpose of bacteriological examination a weighed quantity was intimately mixed with a known quantity of sterile water.

Various dilutions were employed for preparing plate cultures on several kinds of media.

This enabled a rough estimation to be made of the number and kinds of bacteria present. Any colonies having characters suggesting that they belonged to a group of bacteria generally associated with food poisoning or fæcal contamination were picked out and reserved for culture and other tests.

A separate examination was made of material taken from different portions of the beef, viz. :—

*Surface of Beef.*—Mainly jelly. Material A.

*Surface.*—Mainly muscle. Material B.

*Surface.*—Mainly fat. Material C.

*Interior of Piece.*—After sterilization of the surface. Material D.

A wooden dish used for pressing the beef after boiling was clean, but the somewhat wide cracks between the three pieces of which it was made contained *some soft greyish material* resembling soap or fat. Some of this was collected and examined (Material E).

The results obtained are given in the following table. Materials A, B, and C all contained many bacteria. Material E contained a somewhat smaller number. From Material D no growth was obtained. Materials A, B, C and E yielded some colonies of a bacillus which, on further testing, had such characters as to prove it belonged to the Enteritidis or Colon group.

(The term Enteritidis or Gärtner bacillus is used in this report as applicable to bacilli of the paratyphoid group, the characters of which are allied to those of the bacillus originally described by Gärtner under the name of Bacillus Enteritidis).

NO. OF BACTERIA.		BACILLUS ENTERITIDIS.	BACILLUS COLI.
A.	More than 5,000,000 p.g.m.	Present in small numbers	Present in small numbers
B.	Do.	do.	do.
C.	Do.	do.	Not found
D.	No growth		
E.	More than 5,000,000 p.g.m.	Present in very small numbers	Not found

An estimation of the number of colonies of the bacillus enteritidis or of the bacillus coli was not made, as it was impossible to subject the whole of the suspicious colonies present to the series of cultural tests necessary to prove their identity.

The plates showed that A, B and C were not equally contaminated. The following table gives the results of feeding experiments with the beef. Some were made with material taken entirely from the surface, some from the interior, others with a mixture from the surface and interior.

The animals which died were dissected and cultures made in most instances from the blood, liver, gall-bladder, duodenum, and small intestines. Any bacteria thus found were subjected to further tests to establish their identity.

EXPT.	ANIMAL.	MATERIAL.	QUANTITY USED.	RESULT.	LESIONS.	CULTURES.	REFS.
I.	I B. 26 Guinea Pig	Interior and Exterior	20 grams	Dead in 2 days	Slight gastro- enteritis	No growth from blood and organs. Bac : Enteritidis isolated from duodenum	
II.	I. B. 27. Guinea Pig	Exterior and Interior	50 grams	Dead in 6 days	do.	Bac : Enteritidis re- covered from liver, spleen, gall-bladder and duodenum	11 12 24
III.	I.B. 28 Mouse	Interior and Exterior	2 grams	Dead in 3 days	do.	No culture made	
IV.	I.B. 29. Mouse	Exterior and Interior	2 grams	Dead in 3 days	do.	Bac : Coli only re- covered rom liver and spleen	
V.	I.B. 30 Guinea Pig	Exterior and Interior	24 grams	Dead in 6 days	Slight gastro- enteritis	No growth from blood and organs. Bac : Enteritidis from duodenum.	
VI.	I.B. 31. Guinea Pig	Exterior only	40 grams	Dead in 6 days	Gastro- enteritis	Bac : Enteritidis re- covered from spleen, liver, bile, and duo- denum	Serum reaction culture 2.
VII.	I.B. 32 Guinea Pig	Interior only	30 grams	Dead in 6 days	Slight gastro- enteritis	No growth from or- gans. Bac : En- teritidis not fund in duodenum	
VIII.	I.B. 33 Guinea Pig	Interior only	40 grams	No ill- ness			
IX.	I.B. 34 Mouse	Exterior only	4 grams	No ill- ness			
X.	I.B. 35 Mouse	Interior only	4 grams	Dead in 4 days	Slight gastro- enteritis	No growth from blood and spleen	

SUMMARY.—Ten animals were fed with the beef with eight deaths, and in three instances a bacillus allied to the Gärtner bacillus was isolated from some of the organs. The bacillus so isolated had the same general character as that isolated from the beef directly.

The exterior appears to be distinctly more injurious than the interior.

Some animals fed with interior alone died (Experiments 7 and 10), but in these instances no definite proof of infection could be obtained by means of cultures from the internal organs.

Two other feeding experiments were made with cultures of the Gärtner bacilli from animals killed by feeding with beef. *Experiment XI., I.B. 49, Guinea Pig.* Fed on two occasions with 5 c.c. of peptone bouillon culture of the bacillus isolated from the spleen of animal I.B. 27, Experiment 2. No illness was produced. *Experiment XII. I.B. 50, Guinea Pig.* Fed on two occasions with 5 c.c. of peptone bouillon culture of the bacillus isolated from the spleen of animal I.B. 27, Experiment 2. No illness was produced.

The following table gives the results of some inoculation experiments. The inoculations were made subcutaneously, in most instances either with cultures of bacteria from various sources or with known quantities of the beef intimately mixed with sterile water.

EXPT.	ANIMAL.	INOCULATED WITH.	QUANTITY.	RESULT.
13.	Guinea Pig I.B. 43A.	Beef Material A.	1-5 gm.	No lesions produced
14.	Guinea Pig I.B. 43B.	Beef Material B.	1-10 gm.	No lesions produced.
15.	Guinea Pig I.B. 43C.	Beef Material C.	1-5 gm.	No lesions produced
16.	Guinea Pig I.B. 44D.	Beef Material D.	1-5 gm.	No lesions produced.
17.	Guinea Pig I.B. 44E.	Material E.	1-5 gm.	No lesions produced
18.	Guinea Pig I.B. 45A.	Peptone bouillon culture inoculated with 1-10 gm. of material A. and afterwards incubated for 72 hours	2 c.c. of culture	Local swelling and suppuration
19.	Guinea Pig I.B. 37A.	Peptone bouillon culture of bacillus isolated from Material A.	1 c.c.	Some local swelling, no suppuration
20.	Guinea Pig I.B. 37B.	Peptone bouillon culture of bacillus isolated from Material A.	One drop	Slight local swelling
21.	Guinea Pig I.B. 40.	Peptone bouillon culture of bacillus isolated from Material A.	2 c.c.	Slight local swelling
22.	Guinea Pig I.B. 38.	Peptone bouillon culture of bacillus isolated from Material C.	2 c.c.	Slight local swelling
23.	Guinea Pig I.B. 39.	Peptone bouillon culture of bacillus isolated from Material C.	1 c.c.	Slight local swelling
24.	Guinea Pig I.B. 45B.	Peptone bouillon culture of bacillus isolated from spleen of animal I.B. 27. Expt. No. 2.	2 c.c.	Dead in 24 hours. General septicæmia. Bacillus recovered from blood, spleen and liver
25.	Guinea Pig I.B. 46.	Fluid from seat of inoculation in animal I.B. 45. Expt. 23	One drop	No lesions produced

These experiments show (1) that the bacilli isolated from the beef were not very virulent by subcutaneous inoculation or by feeding with cultures. (2) Experiment 24 suggesting the possibility that by passage through an animal the bacillus may become virulent. (3) The experiments with Materials A, B and C indicate that they were not capable of producing infection to a greater extent than the bacilli which had been isolated in pure cultures from them.

#### *Serum Reactions.*

The blood of six patients who had been ill after eating the beef was tested with cultures of various bacteria for agglutinating reactions. The cultures were all neutral peptone bouillon cultures about 18 hours old. The method employed was Prof. Delépine's inter-lamellar method, the dilution being always 1 in 10, and the time of observation two hours.

In addition to the blood of patients, some other specimens were tested at the same time.

In addition to cultures obtained during the present investigation some other varieties of bacteria were employed, all of which were isolated in previous outbreaks of "food poisoning."

The following is a more detailed statement as regards the various cultures used:—

*Culture 1.*—Bacillus isolated from Material B.

*Culture 2.*—Bacillus isolated from spleen of animal I.B. 31, Experiment 6.

*Culture 3.*—Bacillus isolated from spleen of animal I.B. 27, Experiment 2.

*St. Annes.*—Bacillus isolated from potted meat outbreak at St. Annes, July, 1909.

*Mosley.*—Bacillus isolated from blood of fatal case outbreak at Mosley, July, 1909.

*Breslau.*—Bacillus isolated during an epidemic at Breslau.



## SUMMARY.

Two specimens of blood (Annie Smith and Winifred Watson) give an agglutinative reaction with Culture 2.

One specimen (Winifred Watson) gives a well-marked reaction with Culture 1.

A specimen of blood from a case of suspected Typhoid gives a reaction with Culture 1. This blood did not agglutinate the typhoid bacillus. The patient had a febrile temperature and diarrhœa. No other reactions were observed.

### *Examination of Fæces.*

Two specimens of fæces (Ida Nixon, L.B. 4085 and Annie Smith, L.B. 4086) were examined. Both were dark in colour, semifluid, and contained much mucus. Attempts to isolate from them bacteria resembling those found in the beef were unsuccessful. Ordinary fæcal bacteria alone were found.

Feeding experiments with guinea pig gave the following results:

*Experiment 26, Guinea Pig, I.B. 41.*—Fed on two occasions with oats contaminated with 10 c.c. of fæces (Ida Nixon). No illness.

*Experiment 27, Guinea Pig, I.B. 42.*—Fed on two occasions with oats contaminated with 10 c.c. of fæces (Annie Smith). Dead in three days. Only slight lesion found on *post mortem* examination. Cultures from blood, liver, spleen and bile gave no growth. No Gärtner bacilli could be isolated from the duodenum.

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